

2022 END-OF-YEAR REPORT

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Changes in Markets and Climate

2022 was an eventful and demanding year for the agricultural sector. Many sectors were still finding their feet after the challenges posed by COVID-19 in the previous two years and the subsequent supply chain crisis from the latter parts of 2021 when they were hit with an unprecedented increase in input costs.

In only the second month of the year, the Russia-Ukraine conflict triggered an exponential increase in global food, fertilizer, and energy costs, adding to an already bullish trend since mid-2021. The ripple effect of the conflict led to record inflation, exorbitant input costs, shortages of major staples, and rash policymaking. The FAO's Food Price Index soared to a record high in March, up 18% from January. The World Bank's Fertilizer Price Index peaked in April when it was 27% higher than at the start of the year and its Energy Price Index peaked in August, 44% higher in January. Increased energy costs stifled oilseed processing in Europe exacerbating high food oil prices. Increased living costs changed consumer behavior as households had to adjust their budgets, a clear case in point being the decrease in global nut consumption. There was some relief during the second half of 2022, as prices of major commodities started decreasing. This was aided by the Black Sea Grain Initiative. By November, the FAO's Food Price Index and World Bank's Fertilizer Index dropped back to where they started the year, while the Energy Price Index was still 16% higher.

Amidst elevated production costs, producers had to deal with adverse weather conditions and the effects of climate change. Regional heat and drought significantly impacted European potato and US beef and tomato production, losses to bee colonies led to a decrease in Canada's blueberry production, and more frequent frosts threaten Iran's pistachio production.

Despite the severe challenges, some markets continued their rapid expansion, such as Peru's grape and mango industries.

Looking forward to 2023, producers will still face an unpredictable economic climate. The Russia-Ukraine war is still ongoing, and many logistical bottlenecks remain in the supply chain. A volatile geopolitical landscape could lead to trade disputes and regulations, impacting agricultural trade. Producers also have to contend with more weather anomalies brought on by the La Niña phenomenon. However, 2023 will also bring new opportunities for innovative solutions and developing robust supply chains. Consumers' emphasis on healthy and sustainable eating, which was pushed to the background by high living costs, could again gain traction if living costs continue to decline.

Production and Climate Issues

A Decrease in Blueberry Production in North America Pushed Prices Up

Blueberry supplies in North America were substantially short in the middle of the peak season, shooting up prices to historic high levels in 2022.

In the US, spring frosts and hailstorms severely affected the California blueberry crop, causing an estimated 15% YoY production decrease.

In Canada, the honeybee shortage crisis has reached alarming levels affecting blueberry production across the country. As a result, blueberry prices in both markets substantially increased right in the middle of the peak blueberry season when demand for berry fruit intensified.

Decreased Blueberry Production for the 2022 Season.

In the US, the California blueberry 2022 season started earlier than in previous years, with lower volumes due to frost during the spring months. Furthermore, recent hail storms in the San Joaquin Valley damaged crops planned to be harvested in July. According to the California Blueberry Commission estimates, farms produced 55M lbs of blueberries in 2022, a 15% YoY decrease from the 65M lbs produced the year before.

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In Canada, blueberry production decreased across the country, particularly in British Columbia. Canada's blueberry harvest was severely affected due to the ongoing wipe-out of beekeeping colonies, which crisis entered a new stage in 2022. According to the Canadian Ministry of Agriculture, Canadian beekeepers have, on average, lost half their colonies in 2022, and in some areas, there's almost total collapse. The crisis left blueberry farmers with a crippling bee shortage otherwise needed to boost blueberry pollination. As a result, Canadian's blueberry production for the 2022 season was short by 20 million lbs, a 35% YoY decrease.

Short Supply in Peak Season Increased Prices.

The blueberry supply shortage at the start of peak season kept prices in both US and Canada elevated. According to [Tridge's price chart](#), the

wholesale price for blueberries in the US registered a 62.85% YoY increase, from \$38.07/12 flats of 1-pt cups in July 2021 to \$62 in July 2022. The increase took prices to off-season December levels when they stood at \$72/12 flats of 1-pt cups.

In Canada, prices for blueberries also rose due to the tight supplies that the decrease in production has left. According to Tridge's price chart, the wholesale price for blueberries in Canada has registered a 44.72% YoY increase from \$10.52/kg in July 2021 to \$15.23/kg in July 2022.

China Falls Far Short of Ambitious Macadamia Production Targets

China is the world's largest macadamia importer, with imports in 2021 reaching an incredible \$272 million. Over the last decade, China targeted the domestic macadamia industry with the goal of transforming from a net importer to a net exporter.

Macadamia production, like most nuts, is a long-term investment. In most cases, macadamia trees only start making an annual profit from year 7, when yields reach 1.25-1.5mt/ha. It could take more than eleven years to turn a profit on the accrued expenses from year 1. That being said, macadamias are high-priced nuts and are a lucrative investment if production targets are met.

By 2015, China had already planted an estimated 130,000 ha, and over the last 7 years added at least another 170,000 ha to bring the total area in 2022 to more than 300,000 ha. As many orchards are now seven years or older, it is clear that macadamia production in China has not been as successful as

anticipated. The 2022 crop should have been at least close to 150,000 mt according to most production benchmarks. However, China's 2022 crop is estimated to be around 62,000-65,000 mt. Although Chinese production has consistently been below production forecasts made in preceding years, the rapid planting of macadamias continues. [Tridge's December webinar](#) compared Chinese yields to benchmarks in other major producing countries.

There are several reasons for production falling far short of initial forecasts. More than 210,000 hectares were planted in Yunnan province. Virtually all these areas are 700m above sea level, and the majority of these areas were planted around the city of Lincang, which has an altitude of 1,517m above sea level. This is questionable given most research suggests that macadamia production is significantly hampered at altitudes above 700-800m. According to the [Agricultural Marketing](#)



[Resource Center](#), macadamias “can be grown from sea level to an elevation of 2,500 feet [752 meters].”

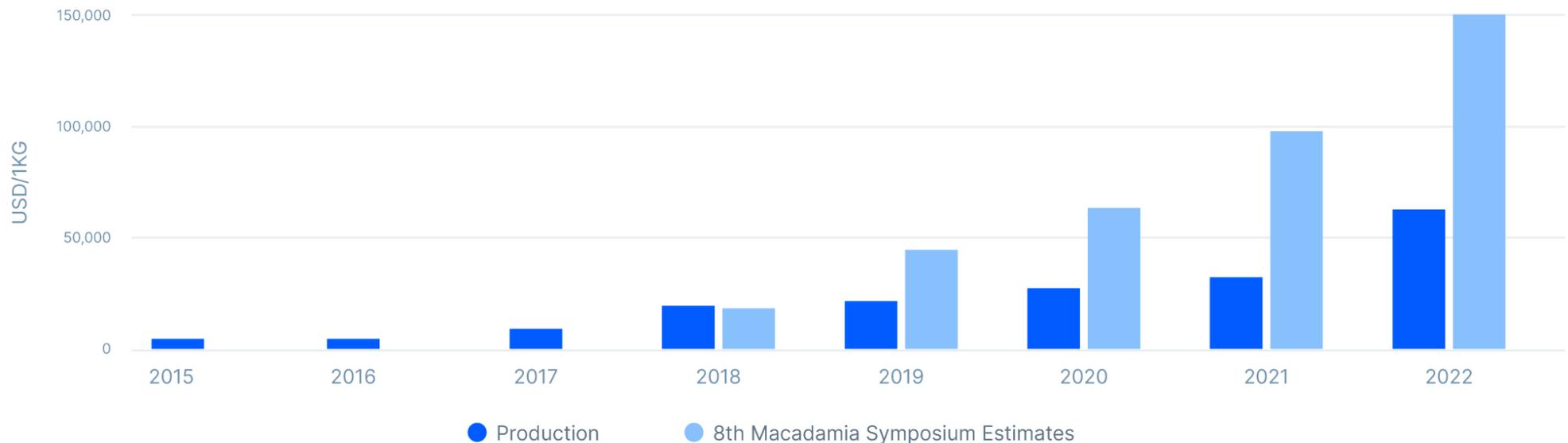
The fact that the majority of production in China is being attempted at much higher altitudes, could be the main reason for the dire yields. Macadamia trees at lower elevations, such as in Guanxi

province, have performed much better. Several other reasons have also been put forward for the poor yields, including adverse weather and sub-standard orchard management. Four years ago, at the 8th International Macadamia Symposium in Lincang, China, several industry forecasts pegged the Chinese crop as high as 190,000

mt by 2022 and 450,000 mt by 2025, but these production figures now seem far-fetched. It remains to be seen if there is a fix for poor yields, especially in the high-altitude areas of Yunnan. China still has the potential to become the world’s largest macadamia producer and

change the macadamia landscape, but this is only due to the large area under cultivation. For reference, global macadamia production in 2022/23 is estimated at 274,000 mt, and South Africa leads production with a crop of 68,522 mt in an area of 60,000 ha.

China's Macadamia Production and 2018 Production Estimates



Source: 8th Macadamia Symposium, International Nuts and Dried Fruit Council

Climate Change and Late Frosts Threaten Iran's Pistachio Production

Large areas in Iran's pistachio-growing regions were once again damaged by frost in April 2022. This was a repeat of late frost at the same time in 2021 and is now the third time in five years that production suffered severe frost damage.

When the cold spell hit pistachio areas in April, there was wide speculation as to the extent of the damage. In July, before the harvest, most crop estimates pegged production near 115,000 mt. In the end, the 2022 crop was only 106,000 mt, according to the Iran Pistachio Association (IPA) post-harvest crop estimate, released in December. This was the second-worst crop in terms of production since 2008.

The 2021 crop was also severely damaged by frost in late March and early April, almost a carbon copy of events in 2022. The IPA's 2021 crop estimate, released in July, pegged production at 150,000, which was later lowered to 135,000 mt. Three years earlier, in 2018 production was

a mere 52,000 mt. Frost during the later flowering stages in April wiped out around 70% of the crop.

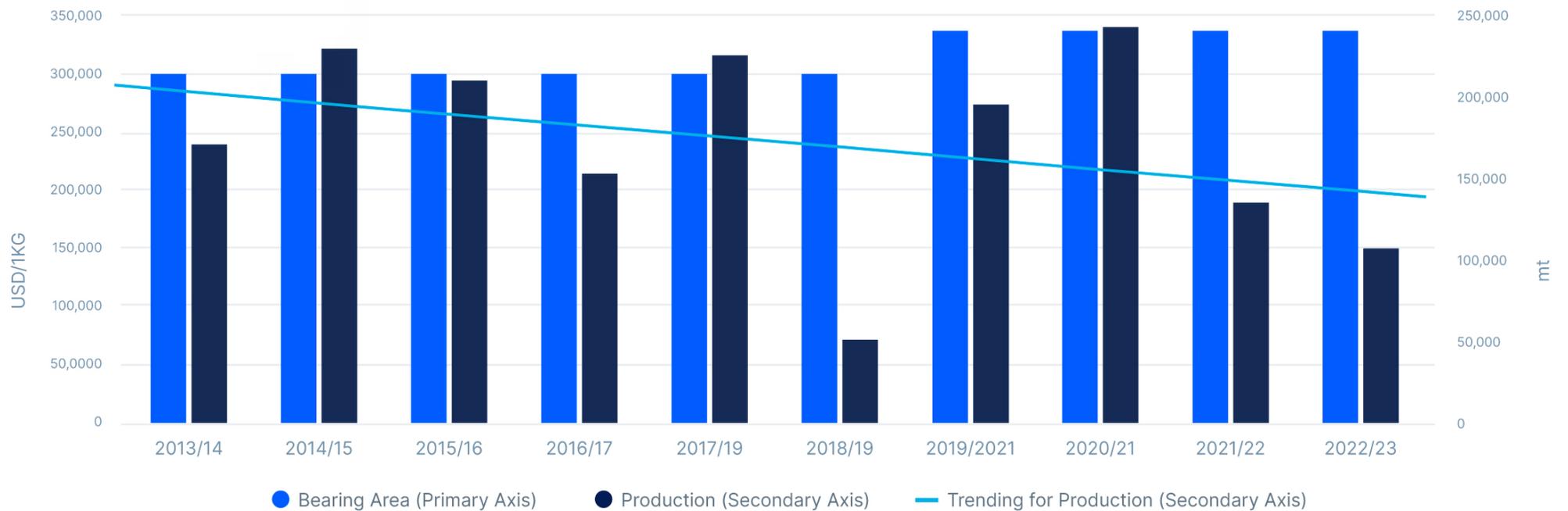
Iran's pistachio production has been erratic but has trended downwards over the last decade, even taking into account the alternate bearing cycle of pistachios. This is made worse by the fact that the area under pistachios has been increasing. The total pistachio-bearing area in Iran is 336,700 ha, up from 300,000 ha three years ago. Iran's pistachio industry is being severely impacted by climate change. Some of the effects of climate change can be managed to some extent. Short droughts can be overcome through irrigation and good orchard sanitation can mitigate pests and diseases in wet years. However, Iran's pistachio production is threatened by prolonged drought, more frequent frost damage, and changes in the dormancy cycle of pistachios due to warmer winters. Some of the solutions offered to



these effects of climate change are modernizing irrigation, planting newer varieties that are better adapted to climate change, and shifting production to areas with better infrastructure.

However, these are long-term solutions to an industry that is already in distress.

Iran Pistacho Production and Area



Source: IPA

US Beef Production to Hit a Record, Driven by a Drought-Fueled Cattle Slaughter

US beef production is set to reach a record high of 28,417 million pounds in 2022, which represents an increase of 1.7% YoY, according to the estimates by the USDA made in December 2022.

Production in the third quarter of the year experienced the fastest YoY growth, at 2.4%, but the growth of at least 1% YoY was recorded for every other quarter as well. Beef production increased considerably in 2022 on the back of more cattle slaughter which, from January through November, totaled 31.64 million heads, up 1.9% compared to the same period in 2021. This resulted from severe drought in many beef-producing regions in the US. According to the latest USDA Livestock, Dairy, and Poultry Outlook Report, by early December, 78% of the US was experiencing drought conditions. Over two-thirds of cattle production are located in these drought-stricken areas. As pasture conditions worsen, beef processors

are incentivized to increase slaughter, with beef production increasing as a result.

However, as the total cattle herd numbers start to dwindle, it will lower beef production in the coming years. In fact, for 2023, the USDA expects beef production to decline to 26,225 million pounds, which would represent the lowest level since 2017 and a YoY decline of 8%.

The drought in the US and many parts of the rest of the world was driven by the “La Niña” climatic effect. This is the third consecutive “La Niña” phenomenon and it is set to continue through winter. Should normal rainfall return next year, pasture conditions could improve and the US will enter into a cattle herd rebuilding process. Under ideal conditions, beef production could return to its normal trend in 2025 or even later. During the herd rebuilding process, producers will be reluctant to sell any animals that can be kept as replacements, lowering beef



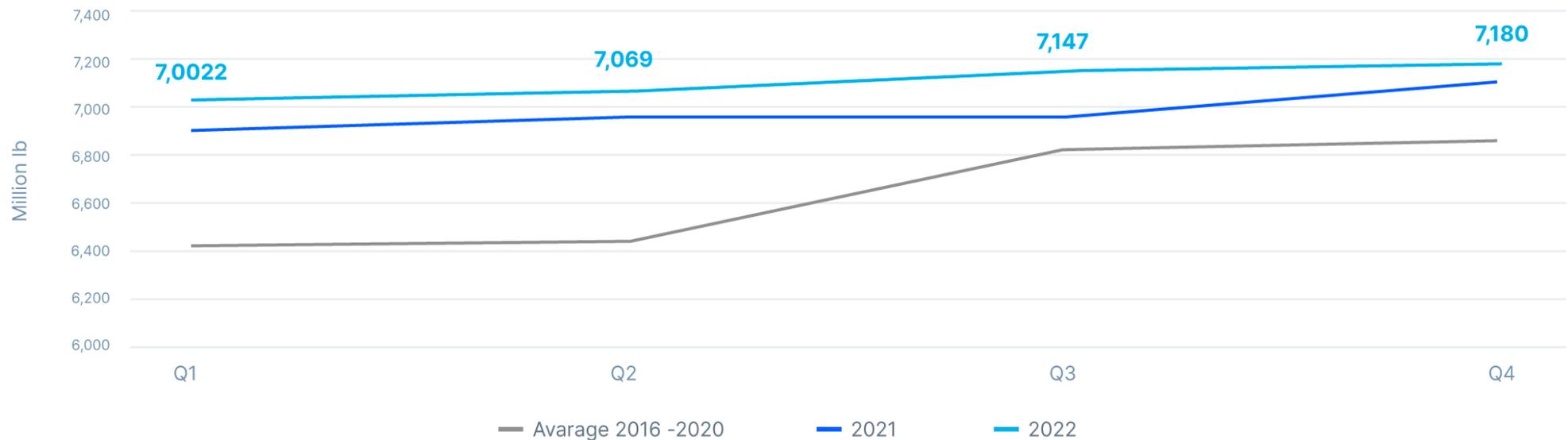
production. This could play out similar to recent events explained in a [Tridge Analysis](#) on Australia’s beef industry, where beef production is forecast to finally increase in 2023, after several years of rebuilding the herd.

As a result of the higher production in 2022, US beef exports from January through October were 5% above the levels from the same period the year before, with exports to China growing by 26%. The top three export destinations are Japan, South Korea, and China.

Meanwhile, imports were down 11% YoY as a result of higher production. The largest import origins for beef in the US are Canada, Mexico, and Brazil, which displaced Australia and New Zealand for the third spot. Year-to-date imports of Brazilian beef were 57% higher than in 2021.

As domestic beef production is set to decline, beef imports are set to increase in 2023 as well.

US Beef Production



Source: Tridge and USDA

US Tomato Industry Suffer a Year of Dryness

The growing water shortage in California has left the country's tomato industry in dire straits. Droughts are happening more frequently, and the state is facing a third consecutive year of dryness. The past 20 years have been exceptionally warm and dry, including the 2012-16 drought, the hottest recorded in history, based on data from the National Oceanic Atmospheric Administration. The current drought has led to a decline in the state's natural water-management infrastructure due to historical over-pumping by farmers, whose reliance on groundwater has increased significantly due to the perennial drought.

This crisis has compromised the country's processed tomato crop, as the Gold Coast produces 95% of the processed tomato products in the US. The country's processing volumes could plummet from 10.8 million mt in 2021 to 9.5 million mt in 2022, a 12% YoY decrease and 1.5

million mt less than projected. This output would also be the lowest in over 15 years and 15% below the 5-year average of 11.2 million tons. The harvested processed tomato acreage could also fall to 224K mt, slightly lower than the 5-year average of 226K mt, while the yield of 46.9 tons per acre could be the lowest in nine years.

These low volumes have led to a surge in the prices of products such as ketchup, salsa, pizza sauce, marinara sauce, tomato juice, and tomato puree. The cost of tomato sauce is 17% higher than the previous year, while tomato pastes have surged 80% since last year. The current price of ketchup is \$3.08 per unit, 23% more than the previous year, and the price could rise to \$3.57 per unit by 2027.

Tomato farmers in Central Valley, the country's "salad bowl," have also had to endure higher fuel and fertilizer costs throughout 2022, making tomato farming significantly more



expensive than before. Growing an acre of tomatoes in the state is now around \$4,000, a 33% YoY increase and 43% more expensive than five years ago, and the cost to canners and processors has risen by 50% over the past two years. Many tomato farmers are also shifting away from the labor-intensive crop as increasing production costs continue to shrink profit margins. Other crops, such as onions and garlic, offer more financial benefits and are less labor-intensive. Local farmers are also finding it difficult to compete with imported brands whose prices are more competitive and attractive to consumers.

[Tridge's weather tracking tool](#) shows the below average rainfall in 2022, and reports suggest that the weather situation is expected to worsen. This is concerning for tomato farmers in the country as tomato yields in California could decline by about 6% over the next decade. Planting for the 2023 marketing year is set to commence in December, and many farmers are looking to the season with caution as another year of adverse weather conditions looms.

Shortages of Processed Potato in APAC and Europe Will Continue in 2023

Potato producers in the EU, especially Spain and France, were battered by adverse spring weather and high summer temperatures. In Poland, the potato crop is estimated at 6.2M mt, a decrease of 13% YoY, according to the Central Statistical Office. At the same time, production and storage costs have skyrocketed. In major EU countries, electricity prices in 2022 increased by an average of 280% (50% to 500%) compared to 2021. In contrast, elevated grain prices have prompted many farmers to plant more grains, like barley and wheat, lowering the potato area.

In the US, potato production is down 3% YoY due partly to decreased planted areas (down 2%) and adverse growing conditions. According to industry reports, some potato processors purchased table stock potatoes in 2022 to make up for lower inventories of processing potatoes, which put additional upward pressure on fresh potato prices. Given the smaller-than-

expected 2022 potato harvest, the 2022/23 MY average price is expected to exceed the nominal record set last year. Wholesale potato prices climbed as high as \$26.00/10.5 lb bag in August and remained at these levels until the end of the year.

In MY 2021/22, China became a net exporter of frozen french fries for the first time, due to increasing production capacities. China's 2022/23 fresh potato production is estimated at 93M mt, a 2% YoY decrease due to a shrink in potato acreage.

Potato production in Canada increased marginally by 0.8% YoY due to favorable weather during the harvest. Still, the expected increased potato demand in 2023 may result in tight supplies for the processing industry.

The summer of 2022 will be remembered as a problematic and costly period due to energy and



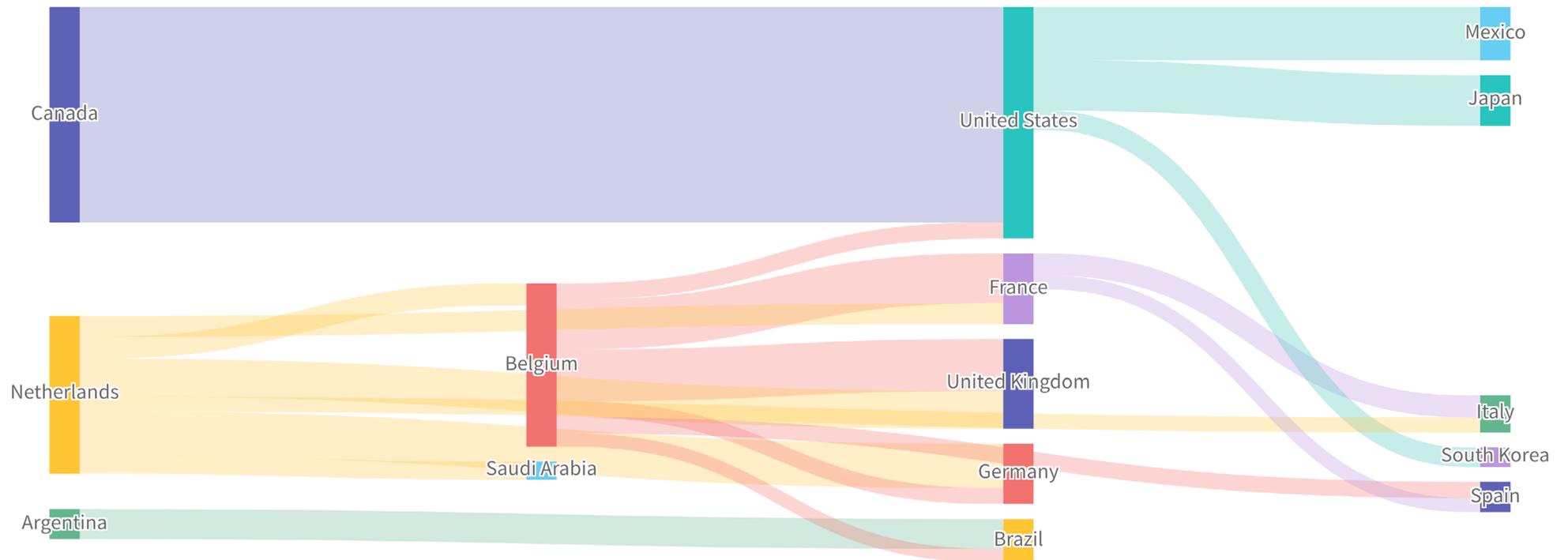
irrigation costs. Lower potato production will reflect tight supply and potential shortages in major consuming countries like Japan and the UK in 2023.

Experts warn that heatwaves and droughts will occur more frequently in upcoming years. Despite modern irrigation and agricultural techniques, rainfall is crucial for vegetable production.

Consequently, farmers are turning to more profitable crops that require less water and are more resilient in droughts, like winter wheat.

A previous [Tridge Analysis](#) of value-added potato shortages shows the effects on the fast-food industry.

Top Import Flows of Value-Added Potato



Source: [Tridge](#)

Olive Oil Production Is Forecasted Down by 23% in the 2022/23 Marketing Year

World olive oil production in the 2022/23 marketing year is forecasted to fall by 23% to 2.62 million mt while that of the non-EU producers is expected to be relatively stable YoY. The European Union is the leading producer, consumer, and exporter of olive oil, and produces roughly 67% of the world's olive oil. Thus, what happens in the EU drives global supply and demand.

In the 2021/22 MY, world production of olive oil came in at 3.39 million mt, the highest recorded over the last five years driven by an increase in both EU and non-EU production. In the next marketing year, however, production is expected to fall by 23% to 2.62 million.

In the EU, after an uptick in olive oil production from 2.04 million mt in 2020/21 to 2.27 million mt in the 2021/22 crop year, production is forecasted to plunge by 34% to 1.50 million mt in the 2022/23 season. Last season's output of 2.27 million mt is the highest recorded in 5 crop

seasons. It thus goes without saying that a reduction in the global crop output is coming from downward revisions of the EU crop.

The diminution in production in the EU in 2022/23 is predicted to be strong with the biggest losses coming from Spain, whose production is expected to be down 48% from 1.49 million mt to 0.78 million mt. This is followed by Portugal, whose production from the 2021/22 year has been revised downwards by 39% to 0.125 million mt. Italy, another large consumer of olive oil in the EU, is forecasted to be down 29% to 0.235 million mt from 0.329 million mt the previous year.

The only exception is Greece which is expected to have a record season with increased yields particularly down the areas spreading the coastal region of Crete. Greece recorded better weather conditions last summer compared to that which prevailed in other EU Mediterranean countries. Production in several olive



oil-producing districts in Greece is thus expected to rebound, pushing total production in Greece in the 2022/23 marketing year up 51% to 0.35 million mt from 0.23 million mt recorded the previous year. That is however not enough to offset the losses in other producer countries.

In Turkey, another big olive oil-producing country, production is expected to fall by 17% to 0.27 million mt. Similarly, reductions are expected in Tunisia and Morocco in the 2022/23 crop year: the former country is estimated to fall 25% to 0.18 million mt while the latter would end up down 22% to 0.15 million mt.

Looking at both the supply and demand sides of the EU balance sheet, the 2022/23 marketing year would be tighter than normal: the season begins with stocks of 0.67 million mt with a production of 1.50 million mt and imports of 0.2 million mt making total supply 2.37 million mt.

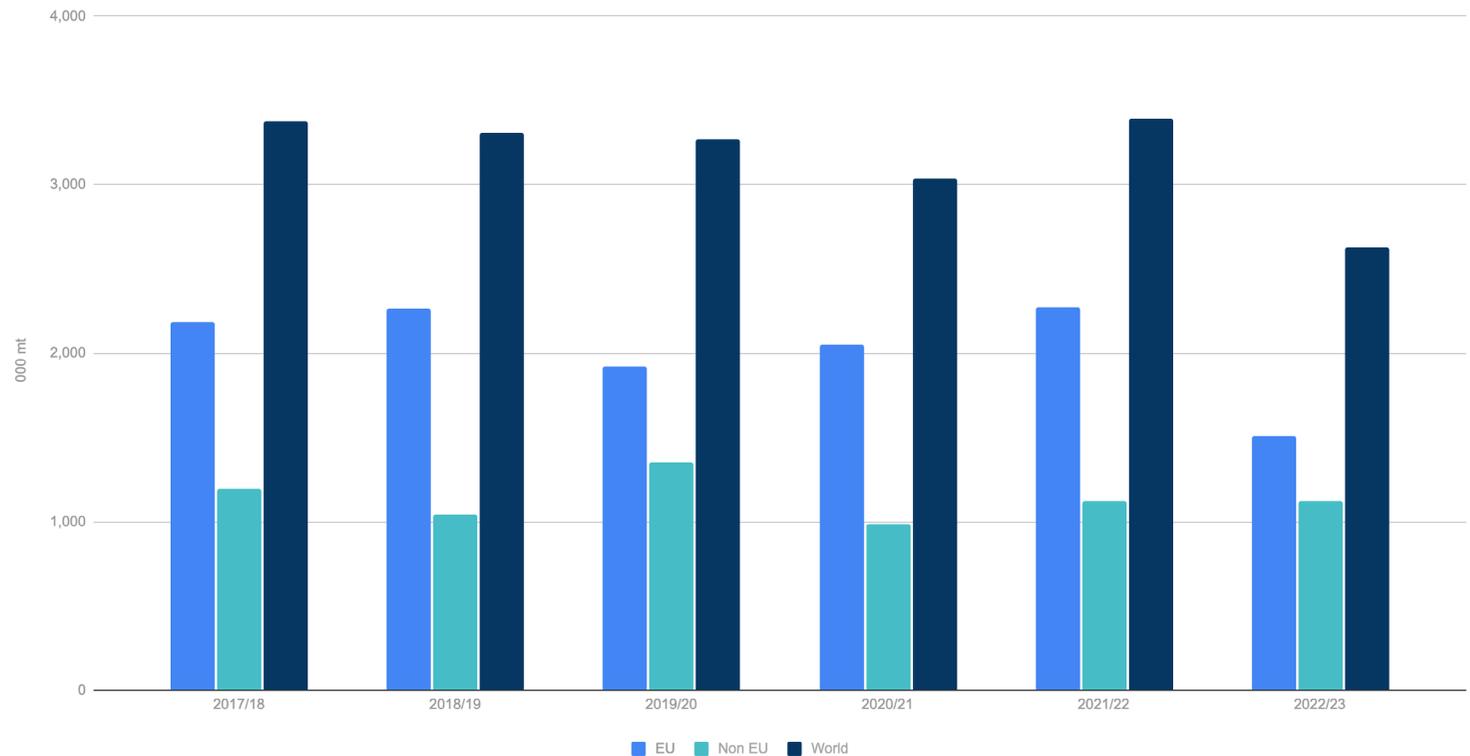
On the demand side, consumption for the 2022/23 year is estimated to be around 1.41 million mt with 0.59

million mt of olive oil expected to be exported leaving ending stocks of 0.38 million mt way below the EU 5-year average of 0.67 million mt.

The fundamental picture is thus looking somehow bleak in the near term. That may however change when harvesting kicks in on the back

of an expected rebound in stocks according to the EU Commission.

Olive Oil Production



Source: EU Commission

Increasing Gas and Energy Prices Will Stifle Oilseed Crushing in Europe, Ukraine, and Elsewhere

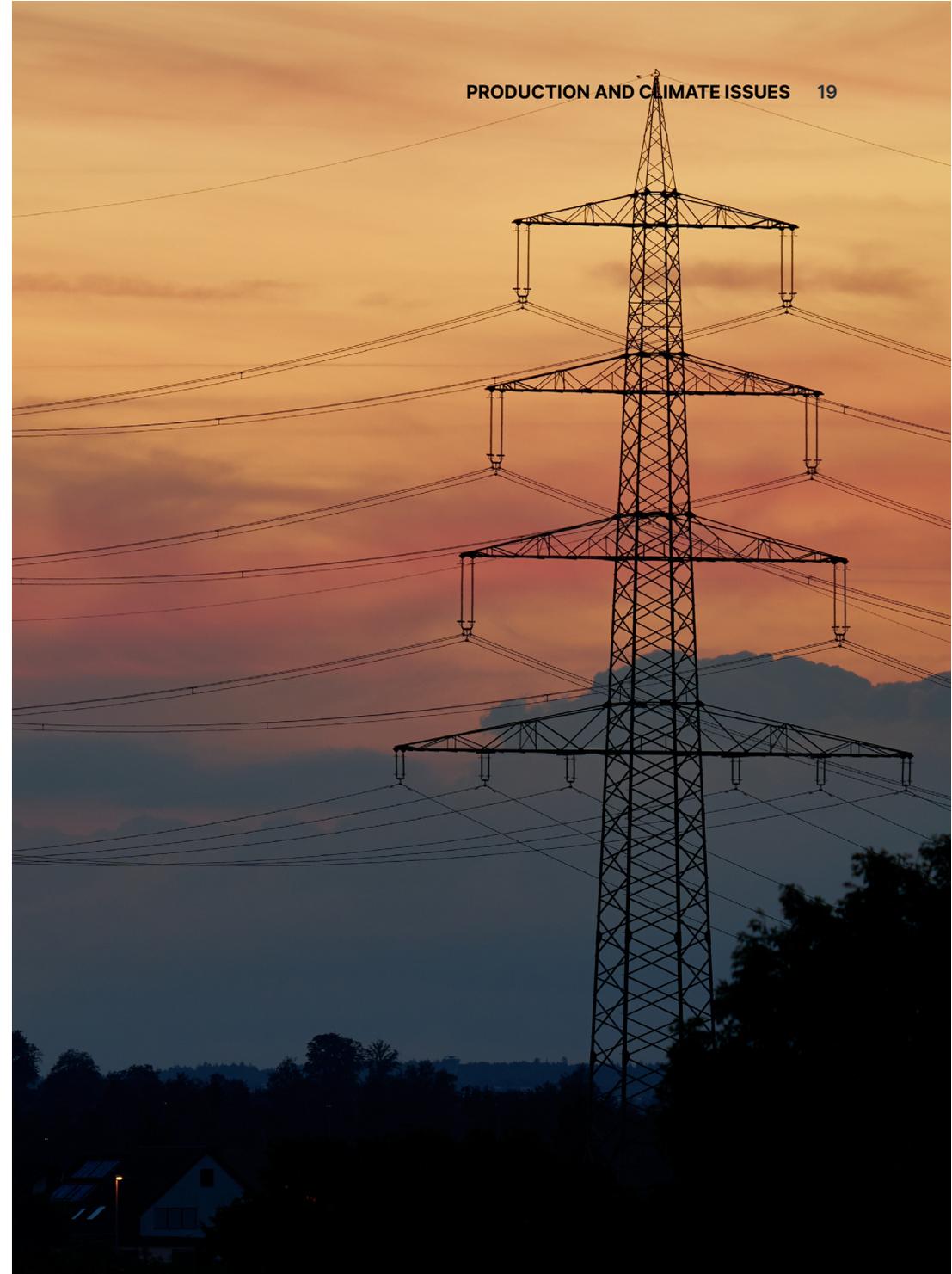
The energy price index data supplied by the World Bank peaked in August 2022, increasing 44% from the start of the year, and adding to the bullish trend from 2021. The price in 2022 saw significant variations, peaking in the first quarter of the year at \$128 bbl before seeing some weakness and increasing again in June. Brent Crude ended 2022 at \$86, albeit lower than previous higher prices, the overall market over the year can be said to have been bullish.

The high cost of energy is creating concerns within the oilseeds market, as is the case in other markets. Oilseed crushing and processing require the use of gas, electricity, and other energy forms. From the de-hulling to the extraction of the oil and transportation to various mills and buyers and can thus not do away with energy usage. Sentiments from market players are suggesting even with a good crop size, crushing may be slower than usual. Crushers may look at other options for disposing of

their seeds, considering the cost involved in crushing and the crush margins that may prevail.

Even for crushers that have their own turbines and are thus somehow excluded from the idiosyncrasies of the common power supply lines, they could be an incentive to save that energy and sell on to the national grid. For those that use plants and generators powered by gas and diesel, they'll consider the trade-off between buying fuel at higher prices which pushes the variable costs up, or not crushing to incur only the fixed cost, i.e., their plants and machinery, land et al.

Be that as it may, the crush margins will be another factor that will affect how much crushers reduce or increase their crushing capacity. In Ukraine, sources close to the market also report similar views. The energy price hike amid the ongoing Russia and Ukraine conflict is causing similar issues in the former's crushing capacity which is thus estimated to



reduce by 30%.

Although the energy prices and cost of production have become a global phenomenon across many countries, nothing is reported in Australia and Canada, which are also big oilseed canola producers and crushers. Supply of both gas and crude oil is not expected to go up at least in the near term to help soften the constraints that continue to suppress the oilseeds industry. But instead, more demand for vegetable oil would be coming from the biodiesel sector.

With the ongoing Russia-Ukraine war, the pressure to force oilseeds crushers to cut down on processing may in turn push prices up. The advice from Tridge is thus to take cover for the nearby exposure and consider staking layers for the months that follow.

Geopolitical Environment and Trade Regulations

Extension of the Black Sea Grain Initiative Eases Grain Trade in Ukraine

The Black Seas Grain Initiative was extended for 120 days on November 17th, 2022, with no changes in the initiative. The purpose of the deal was to establish and maintain a safe shipping corridor in the Black Sea and inspection procedures to address concerns that cargo vessels meant for grain might carry weapons or launch attacks. Past events impacting Ukraine's grain trade were covered in this [Tridge Analysis](#).

As of W3 of December 2022, the volume of grain and leguminous crop exports from Ukraine in 2022/23 MY was 20.6M mt, 32% YoY less, according to data from the State Customs Service, which is published by Ukraine's Ministry of Agrarian Policy and Food. Thus, 7.6M mt of

wheat have been shipped since the start of the season, a 51% YoY decrease in volume. 1.55M mt of barley was delivered to foreign markets (down 70%). Ukraine exported 7.25 M mt of wheat (15M mt in the previous year) in 2022/23, including 482,000 mt (364,000 mt the previous year) from December 1-14. Rain during the harvest has led to lower-quality wheat, and the premium for food grain may soon rise from \$10-15/mt to \$20-25/mt.

According to the European Commission, from July 1 to December 11, 2022, wheat imports to the EU more than tripled, to 3.5M mt, compared to the same period in 2021. The sharp increase in imports is due primarily to an increase in the



supply of cheap wheat from Ukraine. Ukraine exported nearly 2.3M mt to EU countries, a 10-fold increase over the same period last year.

In the first 14 days of December, African countries comprised a larger share of Ukraine’s wheat exports, at 25% compared to 24% in the same period a month earlier, which is more than 1M mt of the total, according to the Ministry of Agrarian Policy of Ukraine. It was also noted that, as of W2 of December 2022, 554 ships with 13.9M mt of agricultural commodities were sent from Ukraine within the framework of the “grain corridor,” of which 4M mt was wheat and 5.9M mt was corn. The continuation of the maritime corridor to export grain from Ukraine has been a critical element in agricultural markets in November.

The extension of the Black Sea Grain Initiative has eased trade and lowered pressure on global wheat supplies. Still, the situation in Ukraine is unwavering for farmers and traders, where prices have increased. Expectations are that, due to the Russia-Ukraine war, grain production in 2023 will decrease, leading to higher prices and disruptions in the global grain trade. It is necessary to continue uninterrupted vessel movements from Odessa, while a long-term solution is much needed for Ukraine’s grain production and trade.

Top Destinations for Ukraine Wheat Exports



Source: [Tridge](#)

Indonesian Pineapple Prices Expected to Increase after Chinese Market Access

Indonesian pineapples have gained access to the Chinese market after the General Administration of Customs in China issued a new protocol to allow the import of fresh pineapples that meet phytosanitary requirements. With this new Chinese market access, Indonesia's fresh pineapple exports are expected to grow substantially in 2023. Furthermore, prices started increasing gradually from September 2022. Apart from the increased demand for pineapples from the Chinese market, the demand for Indonesian pineapples in the Middle East is also expected to remain high.

Indonesia, one of the world's largest pineapple producers, has gained access to one of the largest pineapple import markets, which has seen an accelerated growth rate over the last few years. Therefore, from late August 2022, Chinese imports of fresh pineapple from Indonesia that meet the relevant phytosanitary requirements were

allowed.

Pineapples in Indonesia are a high-value commodity, as production in recent years has continued to rise due to its two harvests per year. In 2021, Indonesia's pineapple production reached 2.92 million mt, a 20% YoY increase, and the export value reached \$336 million. The main markets for Indonesia's pineapples are the United Arab Emirates, Japan, Hong Kong, Singapore, Saudi Arabia, Oman, Canada, Kuwait, and South Korea.

Gaining access to China has been a priority for the Indonesian industry, as there was no agreement on quarantine procedures between the two countries. Prior to pineapples receiving formal market access, only five other types of Indonesian fruit were permitted to enter China: bananas, longans, mangosteens, snake fruit (salak), and dragon fruit. Indonesia has been working on gaining permission to export fresh pineapples to China since 2016.



Producers actively supported the process by sending data and fruit samples to be tested by the Chinese quarantine authorities.

The expected increase in the export volume of pineapples in Indonesia has also brought hope to producers that the price will increase substantially. For Yun Primawan, Tridge's Origination Manager in Indonesia, Indonesian pineapple prices started increasing gradually in September 2022 and continued to rise until December 2022. "The price increase expectations are due to the increased demand in China and the Middle East as it approaches the holiday season. Furthermore, the pineapple harvest in the Middle East has ended (as it enters the winter), and it will begin importing pineapples due to the lack of domestic supply", he mentioned. [Local Insights](#) by Tridge's Origination Managers will provide consistent updates about trade developments.

After a slowdown during the first years of the COVID-19 pandemic, the GACC has recently been

announcing a steady stream of new fresh fruit approvals. Since July, China has opened up its market to other new markets.

However, for Primawan, the critical developing market for Indonesia's pineapples remains the Middle East. *"With still high demand from the Middle East, producers and exporters are optimistic that this year's exports will grow positively compared to last year. The biggest demand is still from the Middle East market"*, he added.

Anti-Dumping Tariffs Impede SA and Brazilian Lemon Juice Shipments to the US

The US has placed an anti-dumping tariff of 50% on South African (SA) lemon juice entering the country due to concerns about a glut in lemon juice stocks from the African nation. The duty is provisional as the United States International Trade Commission (USITC) continues its investigations to determine the extent of dumping. Current estimates place the level at 74%, which is high enough for further sanctions on SA exporters.

The imposed tax by the US is the latest development in a saga spanning ten months: following an influx of lemon juice exports from SA to the US in 2021 owing to rising demand and increased production, Ventura Coastal, a US citrus juice processor, approached the USITC with lemon juice dumping allegations on SA exporters, leading to the initial investigation. These allegations, filed on Dec-21, claimed that SA lemon juice suppliers were dumping their products into the US at below

fair value, causing lemon juice prices in the US to drop significantly, squeezing competitors out of the market.

In Feb-22, the USITC intensified its investigations and extended the deadline to Jun-22. To date, proceedings are still ongoing. However, the USITC has published a preliminary report stating its findings. The report mentions that leading lemon juice processors in SA have elevated dumping rates. Cape Fruit Processors have a dumping rate of 55.67%, and Granor Passi, a juice processing company from Polokwane, has a dumping rate of 74.04%. Other companies under investigation have a combined rate of 55.67%.

The provisional duty placed by the US could derail SA's lemon juice exports. The US is a leading lemon juice market, and the levy could make it too expensive for SA exporters to supply the North American nation. Previously, SA



suppliers enjoyed a competitive advantage in the market due to the low tariff specified in the Africa Growth and Opportunity Act (AGOA). However, the recent anti-dumping duty could result in losses for SA suppliers and create a vacuum for their US counterparts to exploit. In turn, SA lemon juice exporters could shift to alternative markets such as Canada and the Americas.

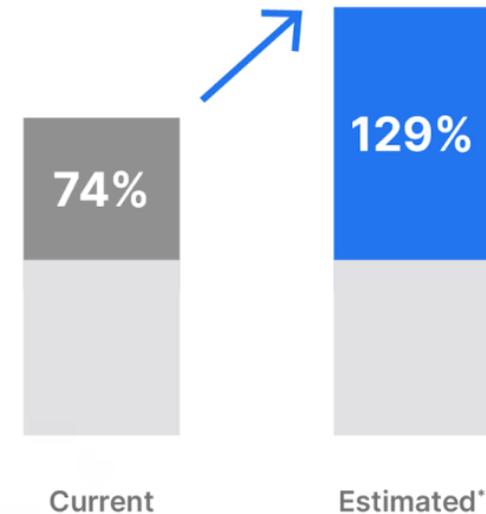
In response to the anti-dumping levy placed by the US, the South African Fruit Juice Association plans to request a postponement of the proceedings from the USITC, a move mirroring that of Brazil, another country facing anti-dumping investigations. The levy will expire when the USITC issues a final judgment, at which point, the tariff could be elevated to 128.61%.

South Africa lemon juice exporters may resort to alternative markets amid reduction in profitability.

The United States
Lemon Juice Import



The United States
Provisional Anti-Dumping Tariff



* if the levy expires

Source: [Tridge](#)

Ethiopia Sesame Seeds: A Growing Market but Ongoing Civil War May Dampen Growth Efforts

Ethiopia has long been a major producer of sesame seeds on the African continent, and the oilseed continues to be a major commercial crop in the country. It is also one of the most widely produced oilseed crops, representing 30 percent of Ethiopia's oilseed production. In terms of foreign income, sesame exports give Ethiopia about \$450 million annually. To buttress the point, the Ethiopian Commodity Exchange earlier in the year disclosed that the country earned roughly \$30 billion from the exports of coffee, sesame seeds, and spices. The importance of sesame seeds to the Ethiopian economy cannot thus be overemphasized.

Mostly cropped in northern and north-western Ethiopia, in the areas bordering Sudan and Eritrea, it is a leading foreign exchange earner for the country and provides income for many smallholder farmers. According to data provided by Ethiopia's Ministry of Trade and Industry, 43%

of production emanates from the Amhara region with 33% coming from Oromia. Benshangul-Gumuz, SNNP, and Gambela produce 12% of the national production total. Varieties of sesame seeds grown in Ethiopia are noted to be creamy, juicy, and of high quality, making them sought after by buyers ranging from domestic consumers and those that can be exported to large consumer markets such as China and India.

Over the last few years, Ethiopian farmers and exporters have been working harder to push further into the Chinese market and take a share in its insatiable demand. That drive seems to have been yielding results to a certain extent as from 2018 to 2021, over 283 thousand mt of sesame seeds have been exported to the Chinese market. In the 2019/20 crop year, Ethiopia's sesame production according to the USDA came up to 280 thousand mt but alarmingly fell 5,000 mt to 255



thousand mt the following crop year. On the other hand, production of other oilseeds such as Niger seed and Soybeans grew by 1.7% and 13.6% to 300 thousand mt and 150 thousand mt respectively in 2021.

The loss in sesame seeds crop output has arisen from the fall in acreage planted and a switch to alternative food crops. Many farmers have surprisingly switched to planting sorghum, sunflower, and soy according to reports from many quarters.

The elephant in the room, however, or the albatross has been the civil war. A great deal of sesame seeds production is cultivated in the Tigray region and Gondar areas north of lake Tana. These areas have seen a significant escalation of the conflict making it near impossible to till the land and even those who have, some have had to abandon their farms and flee. About 500 thousand hectares of sesame fields, a whopping 70% of annual acreage were not tilled in the 2021/22 season on the back of the conflict. Production is likely to push

further down as the conflict and tensions in the region intensify.

The gains made by Ethiopia in trying to expand its production and penetrate the Chinese markets may be on a sudden decline. This, however, may be a gain for other producing countries in the East and the Horn of the African region. Tridge's Fulfillment Manager in Tanzania has already stated that "the ongoing civil war situation in Ethiopia may cause an upward shift in demand for Ugandan Sesame Seed this year," because Chinese buyers "have demonstrated aggressive buying behaviors in other fellow African countries such as Tanzania and Mozambique this year".

Balkew Gelashet, another Tridge Fulfillment Manager in Ethiopia, recently shared a report which highlights the performance of the Ethiopian sesame seeds trade over the last 11 months.

While the numbers in the reports look positive, it's downplayed by the fact that some suppliers in Ethiopia are inactivating licenses for this season which might result in a fall in this year's exports.

Demand Trends

World Nut Demand Dwindles Amid Economic Uncertainty

Throughout 2022, the demand for nuts has been weakened by unprecedented inflation and increased living costs. Consumers opted for cheaper alternatives in the snack market, despite nut prices being at decade lows. Demand trends in the US, Europe, and India, the world's most important nut-consuming regions, show overall nut consumption was down, and there were also changes in consumers' nuts of choice. More expensive nuts, like cashews and pistachios, suffered comparatively larger decreases in several regions. Nut prices are expected to remain low throughout 2023, as weak demand is not keeping up with the ever-expanding global nut supply.

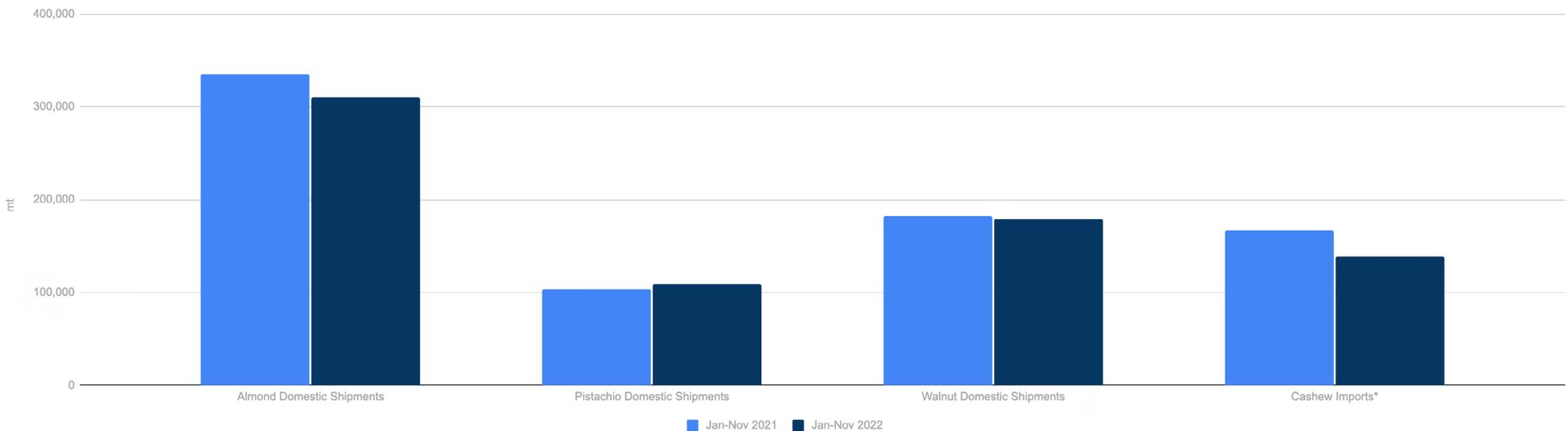
In the US, the world's top nut producer and consumer, demand for most nuts decreased. Around 80% of the world's almonds are grown in California, and the US is also the world's largest almond consumer. Most of the world's pistachios are also grown in California and are comparatively inexpensive in the US. Cashews imported into the US are comparatively expensive.

- Almond consumption could be as much as 7% lower in 2022, compared to 2021, judging by domestic sales. Domestic almond shipments from Jan-Nov 2022 were 310,175 mt and the weak demand has led to an oversupply and low prices for the second year in a row.



- Consumers opted for pistachios over cashews. Pistachios are slightly less expensive than cashews, retailing at \$13-16.00/kg throughout 2022, compared to cashews at \$19-22.00/kg. Pistachio consumption could be up by 4% in 2022, to 117-118K mt, based on domestic shipments.
- Domestic walnut shipments for the first 11 months indicate a decrease in consumption of around 2%.
- Cashew imports in the first 11 months of 2022 were 17% lower, at 126,903 mt, than in the same period in 2021. Cashews are generally more expensive than some of the other nuts, retailing at around \$19-22.00/kg in 2022, compared to almonds which were retailed at around \$11-15.00/kg throughout the year.

US Nut Consumption in 2021 and 2022

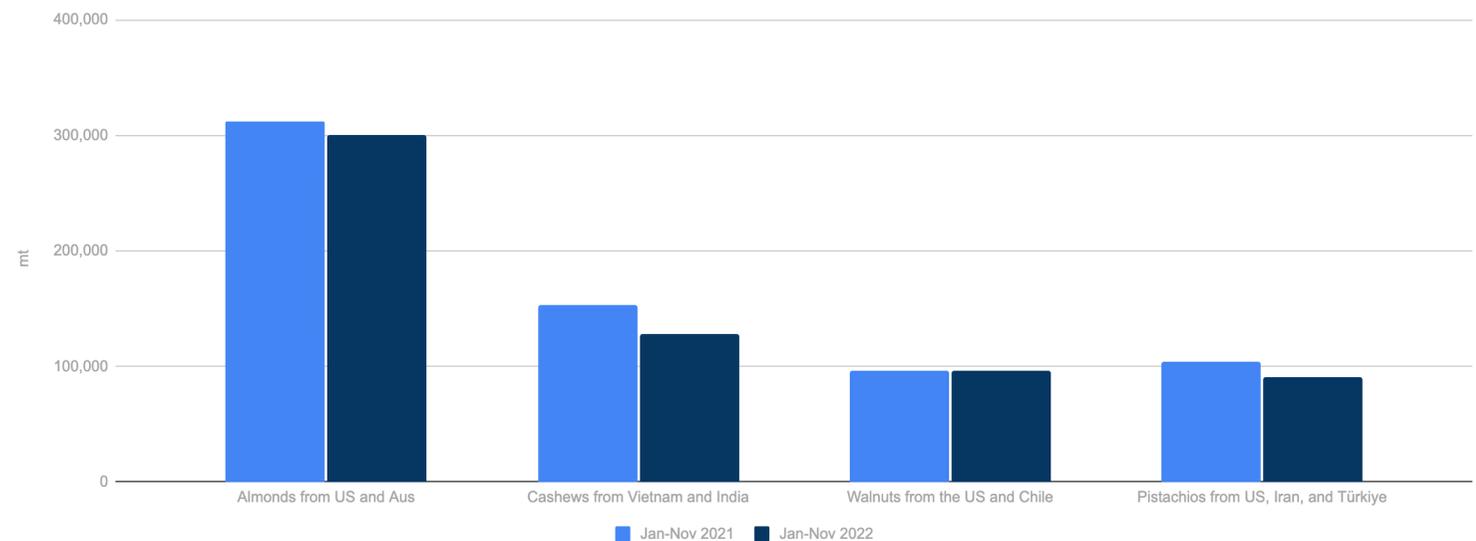


*November cashew imports are an estimate
 Source: ABA, ACP, CWB, US Customs, and Border Protection

More expensive nuts, like cashews and pistachios, showed the most significant decrease. This decrease is reflected in figures of origin countries exporting nuts to Europe.

- Almonds are an important ingredient in the pastry industry, which helped underpin demand. However, around 60% of almonds are consumed as a snack, where the decrease in demand was evident. European imports from the US and Australia, from Jan-Nov 2022, were 4% lower YoY, at 300,480 mt. European production is also lower in 2022/23, with a 25% decrease in Spain, indicating that consumption dropped even more than 4%.
- Europe’s cashew consumption increased around 7% annually between 2017 and 2021, however, cashew consumption in 2022 could be much lower than in 2021. Cashew kernel imports from Vietnam and India from Jan-Nov were only 128,417 mt, 16% lower than the same period in 2021. Europe imports around 90% of its cashews from Vietnam and India.
- In Europe, walnuts are more commonly consumed as an ingredient, than as a stand-alone snack. As a result, walnut imports did not decrease as much as other nuts. Walnut imports from the US and Chile for the first 11 months of 2022 were 96,098 mt (on a kernel basis), virtually the same as last year.
- Pistachio consumption also decreased significantly as consumers were looking for cheaper alternatives in the snack market. Imports from the US, Iran, and Türkiye were 12% lower YoY at 91,353 mt (on an in-shell basis) for the first 11 months of 2022.

Europe Nut Imports in 2021 and 2022



Source:ABC, ABA, VINACAS, Government of India Department of Commerce, WBC, Chilenut, ACP, IPA, ITC Trade Map

In India, the consumption of nuts which are used as a food ingredient, increased throughout 2022, with cashew consumption exceptionally high. Nuts consumed as a snack followed the global trend of decreased demand.

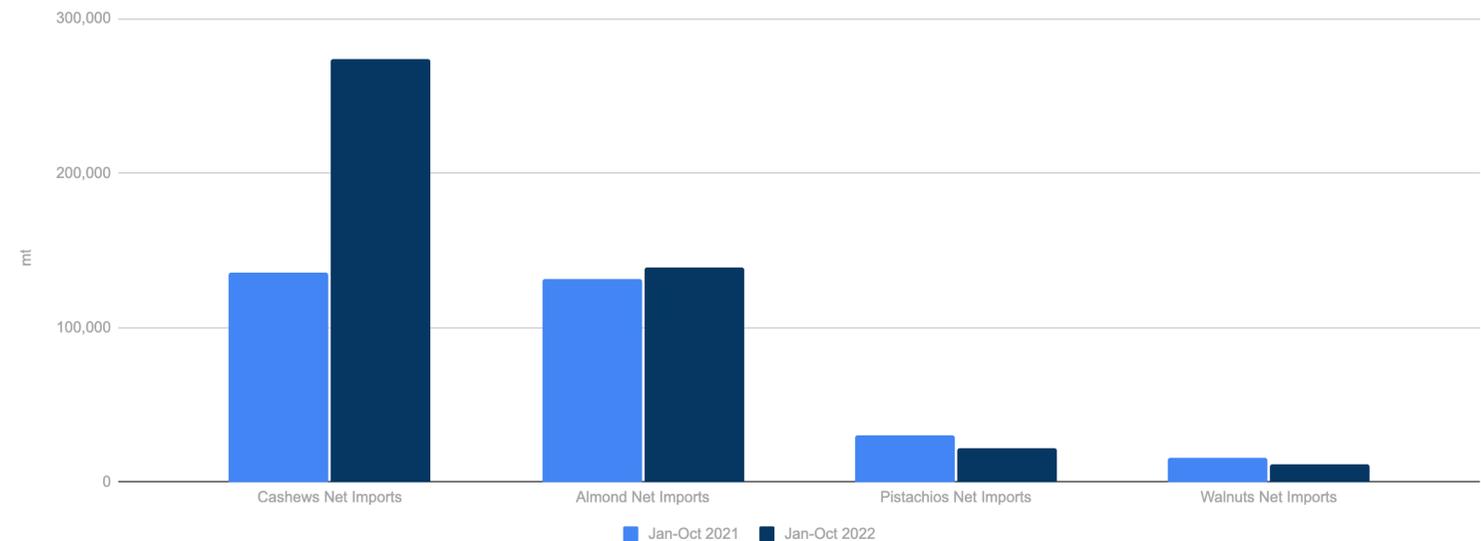
- Where cashews are mostly consumed as a snack globally, in India it is also an important cooking ingredient. Cashews are used in curries, candy, and rice dishes among others. India's net import of cashews, converted to a kernel basis, increased by an incredible 103% YoY to 312,479 mt from Jan-Oct, 2022. Cashews were used as a substitute for more expensive proteins in many dishes.
- Almond imports are 5% higher in the first 10 months of 2022, than in the same period in 2021, at 139,062 mt (on a kernel basis) according to data from the Government of India Department of Commerce. There is a variation in the exports to India reported by the Almond Board of California

and the Almond Board of Australia which indicate India's almond imports decreased slightly over the same period. All things considered, India's almond consumption was comparatively resilient, as it is also an important food ingredient in addition to being a snack.

- Pistachio and walnut imports were significantly lower throughout 2022 as both are predominantly consumed as snacks. Imports of both these nuts decreased by 27% in the

first 10 months of 2022, to 22,260 mt for pistachios (in-shell basis) and 11,391 mt for walnuts (on a kernel basis).

India Nut Imports in 2021 and 2022



Source: Government of India Department of Commerce

US Imports of Frozen Shrimp Decline YoY For First Time in Years

US imports of frozen shrimp (HS Code 030617), totaled 529 thousand mt in January-October 2022, declining by 6% from levels during the same period last year. This decline contrasts with imports during the previous 4 years, which registered annual increases of 20% in 2021, 4% in 2020, 3% in 2019, and 4% in 2018.

Demand started strong during the first four months of the year, but YoY declines started to appear from June onward. From August onward, demand started to lag the average recorded in 2016-2020. The reason behind the decrease in demand toward the second half of 2022 is that a glut was created previously. From March 2021 through April 2022, imports climbed by an average of 28% YoY each month. By then, there was sufficient inventory for the rest of the year.

The data from 2017 through 2020 suggests demand tends to climb toward the second half of the year,

but this wasn't the case in 2022.

Meanwhile, Jan-Oct 2022 imports in terms of value remained practically unchanged at \$4.83 billion, just 0.4% higher compared to the \$4.81 billion recorded in the same period last year. The decline in volume was offset by much higher prices.

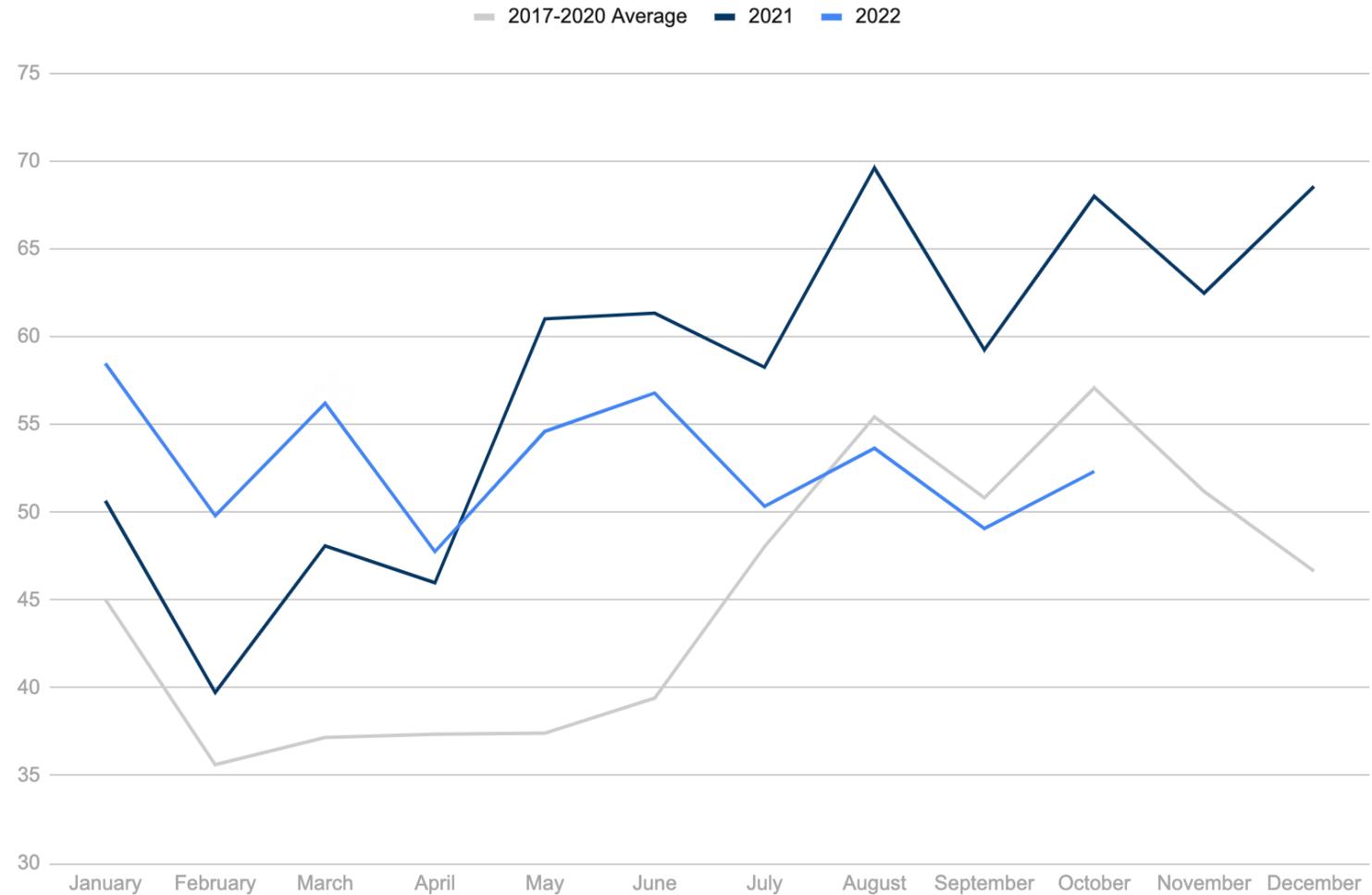
The average price in Jan-Oct 2022 was recorded at \$9.12/kg, an increase of 7% compared to the \$8.51 registered in the same period in 2021. Prices reached a three-year high of \$9.66/kg in November 2021 and remained near that level from January through April 2022. Afterward, the decline in demand pulled prices down to a 14-month low of \$8.71/kg in September. The decline in prices toward the second half of the year was a global trend, as shown in [Tridge's Monthly Report in December](#).

India remained the largest origin for US imports of frozen shrimp in terms of volume, with 40% of the total.



However, imports from this origin during Jan-Oct 2022 declined 15% from levels in the same period in 2021, when imports from this origin represented 44%. Meanwhile, imports from Ecuador during Jan-Oct 2022 climbed 12% YoY. Imports from Ecuador now represent 30% of the total, compared to 26% in Jan-Oct 2021. The average import price from India stood at \$8.85/kg, while the price from Ecuador was \$7.60/kg. The differences in prices from each origin explain the change in import volumes from these two main origins. Meanwhile, Indonesia remained the third largest origin, with 17% of the total in Jan-Oct 2022, but its imports also declined compared to last year's (-5% YoY).

US Frozen Shrimp Imports (thousand mt)



Source: Tridge and USDA

Demand for Non-Alcoholic Beer Rises Amid Shifting Consumer Trends

As the holiday season approaches, the growing demand for alcohol-free drinks and beverages in the US is rising. Younger consumers are driving the surge in popularity of the non-alcoholic beer, wine, and cocktails category and some of the major players in the beverage industry are making moves to penetrate the market. Health consciousness is increasing among the young demographic, with more of them turning away from high levels of alcohol consumption towards flavorful substitutes with little or no alcohol content. According to Gallup, an American analytics firm, 71% of Americans have a negative outlook on alcohol, and 46% are actively trying to reduce their consumption in favor of alcohol-free beverages.

This trend has led leading industry players to launch alcohol-free products in 2022 to capitalize on this growing sector. Freixenet recently produced a 0% alcohol sparkling

rosé wine. Keurig Dr. Pepper, the beverage conglomerate that owns 7UP and Snapple, and Atypique, a zero percent alcohol cocktail manufacturer, have expanded their investment into non-alcoholic breweries. ABInBev, the world's largest beer conglomerate, launched 12 new non-alcoholic products over the past year. Market leaders in the soft drinks industry have also been exploring synergies with alcohol companies to tap into the growing zero-alcohol beverage sector. Coca-Cola now offers the Topo Chico hard seltzers brand, while PepsiCo recently launched Hard Mtn Dew.

In 2022, retail sales of non-alcoholic beer in the US reached \$397.2 million, rising by 20% compared to the previous year. This figure means non-alcoholic beer now makes up 85% of the non-alcoholic beer, wine, and spirits category, as a growing number of consumers in the country moderate their alcohol consumption. Sales of non-alcoholic beer have



climbed 90% over the last decade, significantly outpacing the growth of the broader beer market.

The demand for non-alcoholic beverages is also evident in the global market, with sales reaching \$31.73 billion in 2022, \$6.45 billion more than the previous year.

By 2024, the global non-alcoholic beer market is expected to surpass \$41.32 billion, rising at a CAGR of 8%.

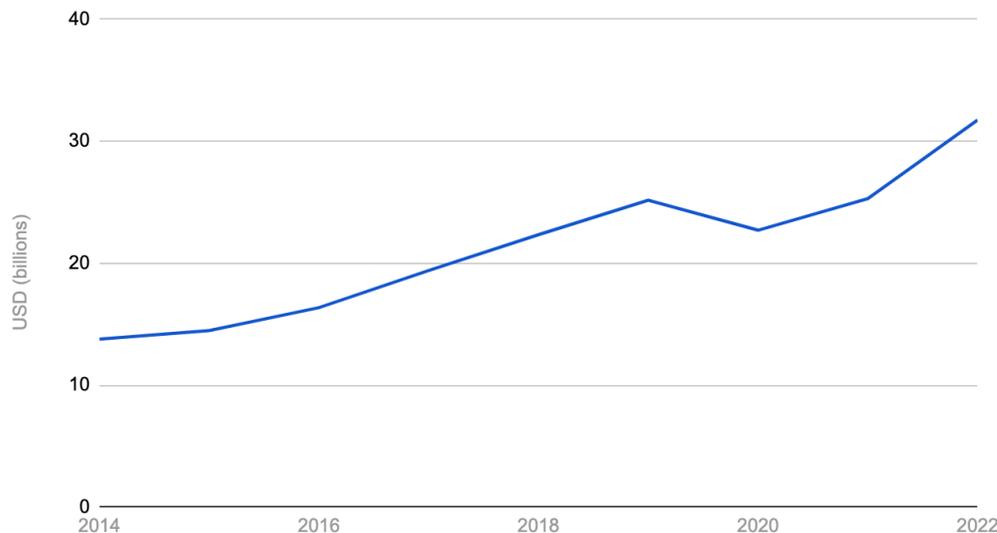
On the other hand, traditional beer sales could increase by only 1.8%.

The growth of the non-alcoholic beverage industry also opens up

markets previously closed to alcoholic drink producers, such as the Middle East, where alcoholic drinks are banned in most countries. Demand has also risen in Asian countries such as Indonesia. Producers also aim to benefit from the low taxes charged on non-alcoholic beverages, and consumers

can therefore enjoy these drinks at far lower prices than their alcoholic counterparts.

Global Non-Alcoholic Beer Revenue (2014-2022)



Source: Statista

Global Non-Alcoholic Beverage Market Trend



Source: [Tridge](#)

China's Soymeal Consumption & Imports and Efforts To Cut Down Its Heavy Reliance on Animal Feed

The Chinese government has announced it is working assiduously to reduce its usage of soymeal in its animal feed. The news came from the country's Ministry of Agriculture and Rural Affairs after a meeting on 9th September, promising to systematically decrease the use of soybean meal in animal feed in a bid to safeguard national security. It further went on to say the reliance on soy imports is a paradox of their food security goals.

China undoubtedly is the world's biggest soybean importer, driven mostly by the demand for meals for animals. In 2019 alone, Chinese domestic consumption of soymeal, according to data from the USDA, was 110.32 million mt, which increased to 112.73 million mt in 2020, but weakened the following year to 106.72 million mt. In 2021 alone, China spent over \$50 billion on soybean imports.

The average production volume from 2019 to 2021 in China was 18 million mt, making it impossible to satisfy domestic demand without imports. To this end, in 2019, China imported 98.53 million mt of soybeans with that number rising to 99 million mt in 2020. Domestic consumption fell in 2021, and imports also fell to 90 million mt that year, with Brazil and the United States being the largest suppliers.

The 5% and 10% YoY fall in consumption and imports respectively in 2021 may have arisen from the impact of the pandemic. Better still, the reduction may have arisen from the decision to reduce its consumption owing to the uncertainty that has bedevilled the grain supply lately. The Chinese government has purposefully put in place the soybean meal reduction and substitution plan espoused reducing the quantity demanded (consumed) while also increasing the supply of other feed grains.



For that purpose, the agriculture ministry has proposed the use of other grains such as bran, corn, rice, sorghum, barley, and cassava as appropriate alternatives to soybean. The use of other oilseed meals such as flaxseed meal, sunflower meal, and sesame has been suggested. The argument to reduce the use of soy, the ministry adds, has the extra benefit of saving costs for farmers and for feed producers to save on materials.

While the call to reduce reliance on soybeans and soymeal may be in the right direction, whether that is achievable or could be achieved within the shortest possible time remains to be seen. Already, Tridge analysts on the ground report difficulties of some pig farmers getting access to other feed meals such as peanut meal, rapeseed meal, sesame meal, and sunflower meal. For the ones that become available, higher prices, often, drive out pig farmer margins causing them to be resorting to soymeal, normally discounted to alternative feed meal.

It is an “easier said than done project” to reduce soybean meal to ensure food security. The Chinese government should thus work harder to support farmers to have access to alternative feed meals and support supply chains as it’s incredibly difficult for them to adjust to the new way of doing things.

Export Trends

Next Peruvian Grape Season Projected for a Record Volume due to Varietal Diversification

Peruvian table grape exports are projected to grow by 11% YoY for the 2022/23 season from the previous campaign reaching a record volume of approximately 71.5 million boxes or 646 thousand mt. The latest projection comes after a 13% growth in the 2021-22 season that just ended, attesting to continuous export growth and achieving the position as the second-largest global exporter of table grapes by volume. While struggling with operational issues such as a lack of containers and escalating freight costs, Peru has been able to increase its export volume by substantially enhancing its varietal diversification, which has led to enabling new markets.

According to data release by the Association of Table Grape Producers of Peru (PROVID), table grape exports from Peru are projected to grow by 11% in comparison to the previous 2021/22 campaign, and the exported volumes are expected to culminate at about 71.5 million boxes (each box equalling 8.2 kilograms).

With this new optimistic projection for next season, Peru will have four consecutive years of volume growth in table grape exports. Furthermore, the Latin American country has substantially gained its export share in the market from the other southern hemisphere grape suppliers. According to the South African Table Grapes Industry (SATI), of the 1.5



million mt exported from the southern hemisphere this last season, 40% were from Chile, 35% from Peru, 23% from South Africa, and 4% from Brazil.

The reason behind Peru's increase in export volume is the replacement of traditional grapes for more productive proprietary varieties. This successful swift in varieties has been driving demand and has enabled the diversification of new markets. Additionally, these new varieties have expanded the seasonality and productive window in the country, taking advantage of a more extensive export season.

Grape plants are experiencing better productive performance in Peru thanks to varietal changes made three or four years ago. As with any crop, maximum productivity is obtained between the third and fifth year after sewing, so currently, younger trees are close to reaching peak productivity. However, the most significant advantage that has come from the varietal shift is the most extended commercial window

that these new varieties bring to the Peruvian export market.

Grape production usually begins with the Red globe in June and extends until March, spanning almost the entire year. In Piura, seedless grape production is initiated in September along the Peruvian coast until March. Volumes mostly culminate in April. However, the 2022/23 season for many producers started in June and July with an early harvest and exports to South and Central American countries.

Peruvian growers took advantage of a commercial window in April and May, a time of year when demand for white seedless grapes is not satisfied. Chile has red grapes at this time of year and the Mexican table grape supply, which takes over the North American market, only comes into season in May. In fact, Peruvian table grape exports in April of the 2021/22 season increased 500% YoY compared to the same weeks in the previous 2020/21 season.

According to Ana Altimari, Tridge's Distribution Manager in the UK, retailers in the UK have gotten used to the arrival of early southern hemisphere grapes, mainly from Peru. *"By W34 of the year, retailers are receiving seedless grapes from Spain, Greece, and Italy. However, this is a key time to start looking at the Peruvian market, which is scheduled to start harvesting their early seedless varieties by now,"* she explained. *"By W36, the delivery schedule, varieties, and pricing are expected to be the main topic of discussion with Peruvian growers and wholesalers for the UK market,"* she added.

Furthermore, Peruvian table grapes will soon be exported to the Japanese market, which has been in the pipeline for a long time and will undoubtedly further increase Peru's export volume growth.

Exports of Peruvian Mangoes Expected to Grow by 25% in the 2022/23 Season

The volumes of Peruvian mangoes are expected to increase by up to 25% in the 2022/23 season. Shipments to the US are expected to kick off earlier than usual, around the first week of December. However, Peruvian exporters continue to battle with high freight prices and a lack of containers, which is a concern for the new campaign. However, for the 2022/23 season, shorter shipment times are expected, especially for the Asian market, where logistics operators are offering shipments with shorter transit times of between 28 to 33 days.

According to the Peruvian Association of Producers and Exporters of Mango (APEM), a 20 to 25% YoY increase in volume is expected for Peruvian mangoes for the 2022/23 season. Additionally, the National Mango Board expects an 18% YoY increase in the volume of Peruvian exports to the US, owing to an earlier kick-off of the season than usual, which was around the first

week of December.

Peru is the world's fourth largest exporter of mangoes, especially of the Haden, Tommy Atkins, Kent, and Edward types. The season begins in Piura, the country's main producing region. The season kicked off in Week 46 and is expected to last until Week 12 of 2023. According to APEAM, for the 2022/2023 campaign, the destination markets would maintain their participation percentage so that Europe would concentrate 60% of the total fresh mangoes dispatched by Peru, the US would participate with 35%, and the remaining 5% would be shared between Asia and Chile.

Peruvian exporters, however, continue to battle with high freight prices and a lack of containers which, as recently warned by the Peruvian Association of Producers and Exporters of Mango (APEM), continues to be a concern for the new campaign. Furthermore, lengthy transit times in the 2021/22 season



led to the fruit arriving at destination ports in unsuitable conditions. Additionally, shipping and packing costs went from 40% to 80% of the cost, which caused the result of the business to be negative and, in some cases, the bankruptcy of companies that could not afford the costs.

According to Jose Torres, Tridge's Origination Manager in Peru, for the current 2022/23 season, logistics operators are offering shipments with shorter transit times. Exporters are looking to export to Asia due to reasonable market pricing and returns. However, transit time is still a risk, taking between 35 and 40 days by the ocean, this being one of the main reasons Peruvian mangoes didn't arrive in optimal conditions in the previous 2021-2022 season. *"For the current 2022-2023 season, logistics operators are offering shipments with shorter transit times of between 28 to 33 days. These vessels will depart from Callao, far away from Piura, where most fields and packing houses are located, increasing the internal freight (Piura to Callao), but assuring more stable*

conditions at the destination," he reported.

Additionally, it has been reported that the export season in Peru will begin later this year due to a delay in the harvest. According to Daniel Lopez, Tridge's Origination Manager in Peru, in 2022, the hot weather in Peru started at the end of October 2022, causing a delay in the mango harvest to W48 or W49 when mangoes will be ready to export. He added that by the start of the season, the fruit would be smaller, tending to sizes 9, 10, and 12. However, by the middle of the season, the sizes will get bigger around sizes 7, 8, 9, and 10. Despite the late start, mango shippers expect a strong season with different volumes and Brix grades for all the various markets. [Tridge's Market Guide](#) has more information about the production and export seasonality of Peruvian mangoes.

Rise in Egyptian Grape Exports in 2022 Amid Inflation and Increased Production Costs

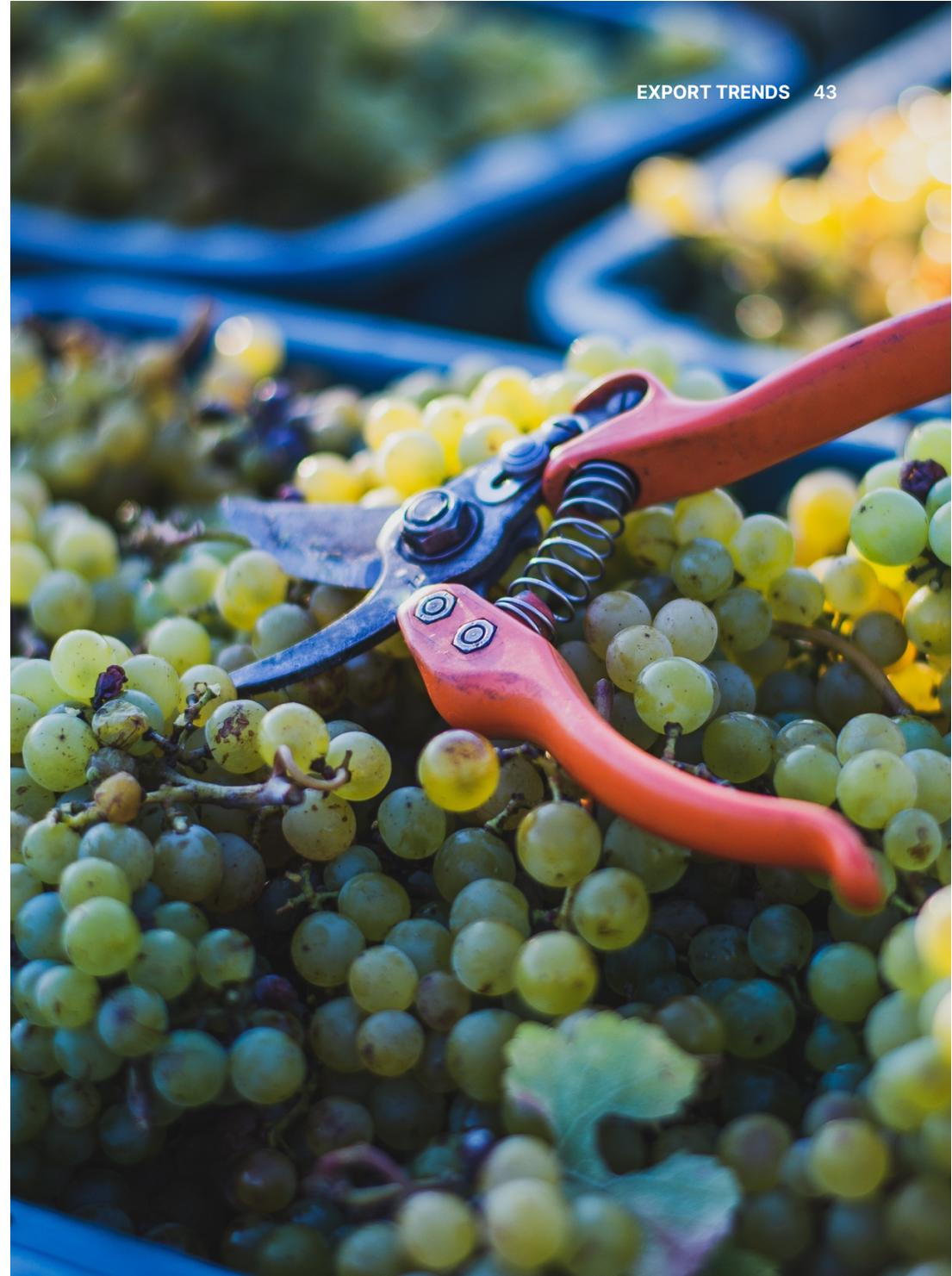
Up until September 2022, table grape production in Egypt reached 1.48M mt, an increase of 3% YoY. Favorable weather conditions and the introduction of new grape varieties mainly contributed to production growth. Following increased production, export quantities are expected to be 180,000 mt, a 5.8% YoY jump in 2022. Agricultural and horticultural exports from Egypt from January 1, 2022, to October 26, 2022, amounted to 5,285,820 mt, an increase of 335,639 mt from last year. Grapes took fourth place in Egypt's fruit and vegetable exports.

EU countries and the United Kingdom were the top export destinations in CY 2022, accounting for 58% of total exports. Russia and Saudi Arabia were other essential markets, taking 23% and 10% of the market share respectively.

In 2022, industries reported a 35-40% increase in cultivation costs to almost \$28,000/ha due to the

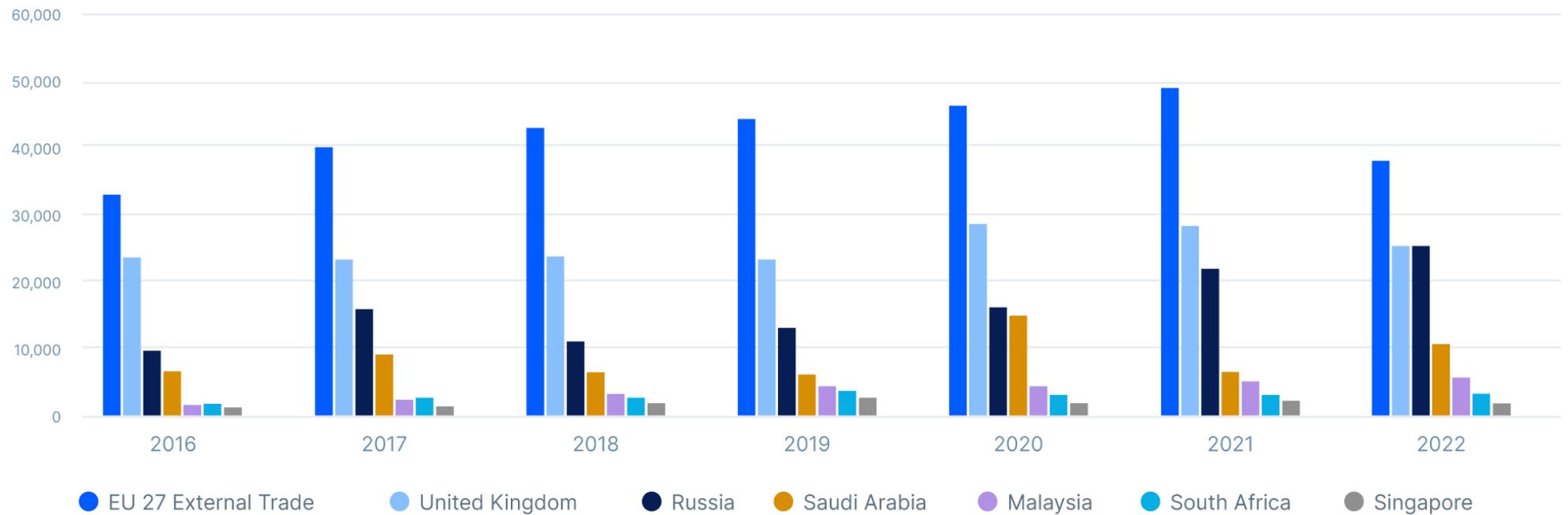
challenges of US dollar liquidity and high inflation, according to the USDA FAS report. In 2020, the production of one hectare of grapes would initially cost approximately \$15,000, not including land costs. In 2021, prices increased by 30% due to the COVID-19 pandemic-related supply chain disruptions that limited the availability of specific inputs. In Egypt, investments in high-value grape varieties usually offer good returns, especially for the producers targeting export markets. However, due to the Egyptian pound devaluation (USD/EGP at 20.27), the high input costs decreased the revenues considerably.

The diversification of Egypt's markets is a critical point in the rising grape export. Tridge also had a small but essential role in boosting trade between Egypt and Brazil, with the first shipment of grapes weighing 28 mt purchased by a large wholesaler in São Paulo. Brazilian grape imports have been falling in recent years due



to increased national production, which increased the country’s self-sufficiency. Rising input costs, as well as financial risks due to high inflation, will continue to pressure the profit margin of farmers and traders in Egypt, despite the rise of exports.

Egypt's Main Table Grapes Export Destination



Source: USDA

South Korean Seafood Export Volume Climbs 26% YoY in Jan-Nov 2022

According to Korea Customs Service, South Korean seafood exports (HS Code 03) totaled 678 thousand mt in January-November 2022, which represents an increase of 26% YoY. In terms of value, exports totaled \$1.89 billion, which represents an increase of 28% YoY. Revenue increased more than the volume as a result of a slightly higher average export price of \$2.81/kg recorded in January-November 2022 compared to \$2.77/kg in January-November 2021.

A weaker Korean won throughout the year helped to maintain export prices with only a mild increase, which in turn helped export volume to climb sharply. From January through November 2022, the average exchange rate was 1,291 KRW/USD. This is 13% higher compared to the same period last year.

China remained the largest destination for Korean seafood exports, with 51% of Korea's total

from January-November 2022. However, its share increased drastically from 39% in the previous year, as exports in Jan-Nov 2022 climbed 62% YoY.

Thailand remained the second largest destination for these exports, although its share of the total decreased from 15% in Jan-Nov 2021 to 12% in Jan-Nov 2022, as exports to this destination only climbed by a mild 2%. Meanwhile, Vietnam surpassed Japan as the third largest destination, with exports to this destination climbing 2% YoY while exports to Japan (now fourth) declined 8% YoY.

The combined share of Nigeria and Ghana, which only made 2% of Korea's exports of these products in Jan-Nov 2021, rose to 6% in Jan-Nov 2022, making the African countries the fifth and sixth largest export destinations this year. Exports to these destinations soared, increasing 420% to Nigeria, and 200% to Ghana.



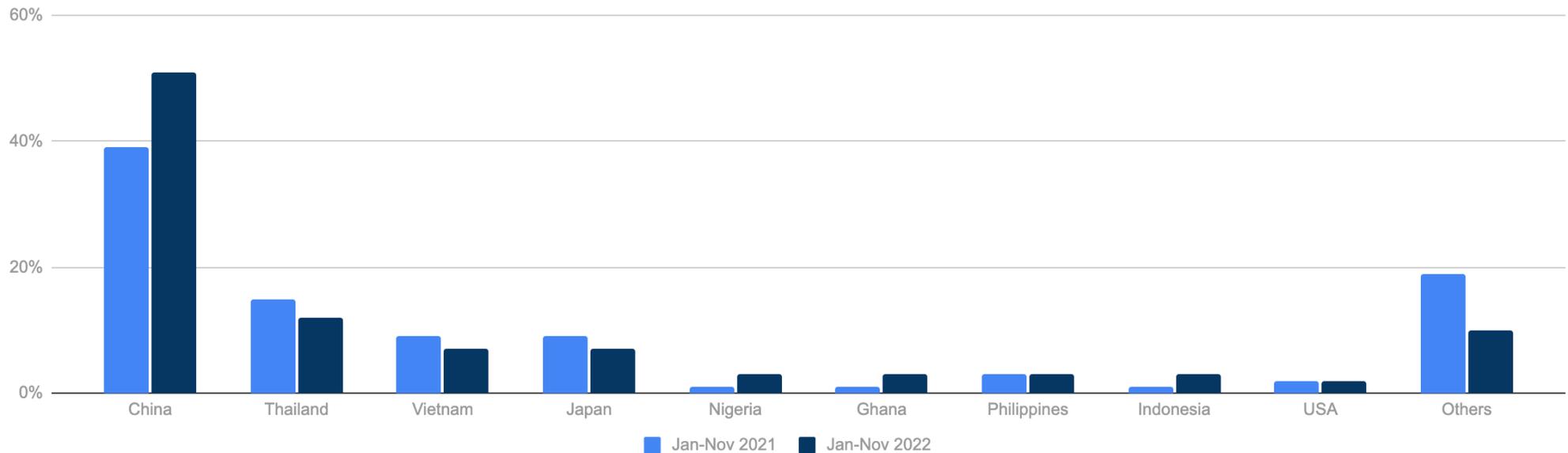
Indonesia is also worth mentioning, as exports to this destination climbed 181% YoY in Jan-Nov 2022, making the Southeast Asian country, with 3% of the total share, the eighth largest destination, just behind the Philippines (7th) to which exports increased by a much milder 4% YoY.

The core of the exports in both volume and value was frozen whole fish, representing 86% in volume and 57% in value. Molluscs, fresh or frozen, represented 6% in volume and 11% in value. Filleted fish, fresh or frozen, represented 4% in volume and 17% in value. Among exports of

frozen fish (HS code 0303), the product with the highest share was Alaska Pollock, with 34% of the total. Its share climbed from 24% last year as exports grew 89% YoY in Jan-Nov 2022. Following pollock is skipjack tuna, with 16% of the share. Exports from this product declined 8% YoY.

Meanwhile, exports of mackerel soared, climbing 148% YoY to reach a total share of 10% (from 5% in 2021), despite an increase in price as tracked by [Tridge Data Analysis](#).

Market Share of South Korean Seafood Export in 2021-2022



Source: Tridge and Korea Customs

Price Trends

Lower Quantities of Moroccan Clementine Pressures Prices Up

Drought and high temperatures affected clementine production in Morocco, delaying harvest and lowering output by 30-40%. Water scarcity caused a decrease in citrus orchards, being removed due to the rising expense of irrigation and damages from droughts. The export of fresh clementines from Morocco will decrease due to lower volume and increased prices.

Morocco's 2022/23 clementine season began in the middle of October 2022, with farm gate prices at \$0.35/kg in W1 of October 2022, per Tridge price data. Fresh clementines prices spiked to \$0.55/kg in W5 of October 22, a 57.14% MoM increase. Producers announced a 40% reduction in clementine

production quantities at the start of the season. Along with a lack of volume, growers have been dealing with numerous quality issues since June, including non-homogenous color and broken clementine peels brought on by high temperatures.

Tangerine and clementine production is anticipated to drop to 900,000 mt for MY 2022/2023, a 34% decrease from prior season levels due to heat stress, a lack of water, and higher input costs. According to trade sources, many orchards in Morocco reportedly lost 40-50% of their fruit during the fruit set. Morocco's severe water shortage substantially impacts all citrus output, causing orchard clearance. Farmers claim that the 2022 drought reduced the



underground water reserves, leading to a record-low irrigation water supply. While some farmers could use groundwater as a replacement, many small farms could not afford to drill new wells. Many growers removed citrus orchards due to the rising expense of irrigation and other production costs.

Lower production of clementines in Morocco is accompanied by increased production costs, as fertilizers have risen from 3 to 18 dirhams per kilogram. Although freight rates decreased in recent months, the pre-pandemic level has yet to be achieved. Despite lower freight costs, this may also cause a decline in Moroccan citrus shipments to overseas countries.

These factors translate to the clementine price rise in the Moroccan markets, which reached \$1.26/kg in December in Moroccan cities. Prices are expected to rise in the coming period.

Due to the delayed fruit maturation, the export season began in early November, two weeks later than

usual. Based on decreased supplies, expectations are that in MY 2022/2023, tangerine and clementines exports will be 325,000 mt, 48% YoY less. Morocco's major export destinations continue to be the EU and Russia, and Morocco exported a record 109,254 mt to the US in MY 2021/2022.

Oversupply of Almonds Keeps Prices at Decade Lows

Global tree nut production is expected to reach 5.24 million mt in the 2022/23 season, an average annual increase of 5.3% over the last 5 years. Global nut demand increased mostly in unison with production, but only up to 2021. Over the last two years, supply has outstripped demand, pushing prices ever lower. Nut prices have hovered near decade lows since 2021, and due to the global oversupply could remain under pressure throughout 2023.

Almonds are the most produced and consumed nut globally, and makes up around 30% of global tree nut production. Global almond production in 2022/23 is estimated at 1.53 million mt by the International Nuts and Dried Fruit Council (INC). While this is the lowest crop in 3 years, it is by no means a small crop, and with weak demand in 2022, supply could again outstrip demand. If the US does not export more than 1.8 billion lbs (816,000 mt) of its 2.6

billion lbs (1.18 million mt) crop in the 2022/23 MY, it could be stuck again with a stocks-to-use ratio of more than 30%. Judging by historic trends, exports will likely fall short of this target. Due to these supply and demand dynamics, almond prices remain near decade lows and there are few bullish factors providing price support. Almond kernel prices, based on the value of exports from the US, dropped as low as \$4.62/kg in September, the lowest since 2011 as the harvest season intensified downward pressure.

In Europe, the world's largest almond-importing region, wholesale prices kept trending downwards throughout the year. Most almonds coming into Europe, pass through the port of Barcelona in Spain. In Spain, almond kernel prices (large kernels of the Marcona variety) dropped as low as \$8.82/kg in wholesale markets in October. This was the lowest price in at least a decade, and 16% lower than at the

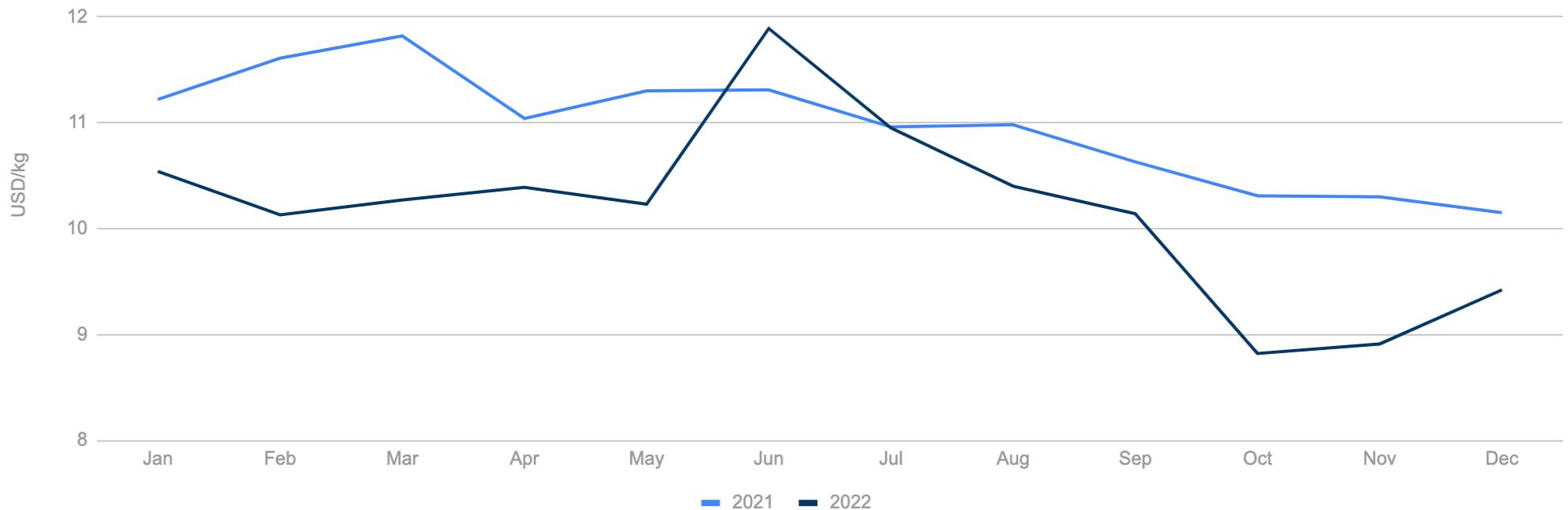


start of the year. Prices did find some support in November and December, increasing to \$9.42/kg to end the year. This is still far from pre-pandemic prices when they averaged \$10.04/kg in 2019.

Prices are expected to remain at low levels throughout most of 2023, and any price increase is expected to be gradual. A lot of economic uncertainty still looms in 2023, and households might be cautious when

adding expensive snacks like nuts to their shopping lists. The ample global supply of nuts will put a cap on price gains even if a decrease in living costs leads to a slight increase in demand.

Almond Kernel Wholesale Price in Spain



Source: Tridge

Global Meat Prices Reached Record Highs by Mid-2022, But Are Set to End the Year in a Downward Trend

Global meat prices have considerably declined from record highs earlier in 2022. The story varies among products, as beef and sheep meat have experienced the sharpest decline, while poultry and pig meat prices are still well above 2021 levels.

The FAO meat price index fell in November to its lowest level since February 2022. It is still higher compared to the same month last year (+4%), but with the lowest inter-annual difference since March 2021. It's worth noting that the index for bovine meat (beef) has started to post an annual decline since last August, while ovine meat has decreased against last year's readings since last May. However, pig meat prices are increasing at a faster rate in recent months (+11% in August, +19% in September and October, and +20% in November). Meanwhile, poultry prices remain considerably above last year's, posting a 17% YoY increase in November.

Beef prices in Australia, which are a good proxy of global beef prices (Australia being one of the major beef exporters), have decreased substantially in recent months from record highs earlier in the year. In November, the average beef price declined by 13% from the levels in the same month last year.

For beef, in particular, demand and production are expected to decline slightly in 2023. While the drought in the US is expected to hamper 2023 production, recovering production in Australia and China is forecast to almost offset this decline. Brazil, the largest beef exporter, is expected to continue growing YoY.

As of October 2022, the USDA expected global beef production in 2022 to be 59.37 million mt, up 1.7% YoY (+1 million mt). However, for 2023, the same organization forecasted global beef production at 59.24 million mt, down 0.2% YoY (-128 thousand mt). Total world consumption is expected to decline



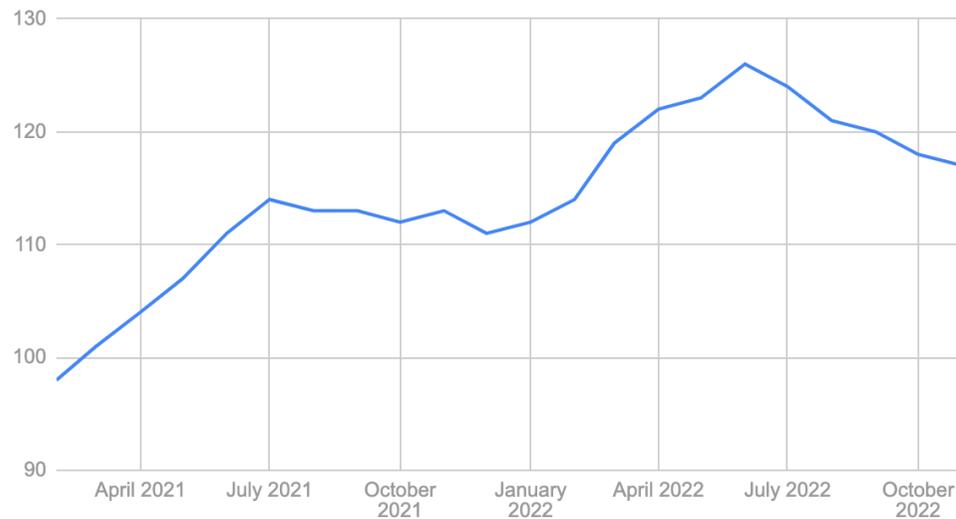
by the same 0.2% YoY (-115 thousand mt).

A sharp decline is expected for the 2023 production in US production, coupled with declines in the European Union that will more-than-offset considerable increases in China, Australia (sharpest increase in percentage terms), Brazil, and

India. China is expected to increase its beef consumption in 2023 by 85 thousand mt YoY. However, its reliance on imports will considerably decrease as its production is expected to grow by 375 thousand mt YoY next year. Meanwhile, India is expected to increase its beef consumption by 75 thousand mt in

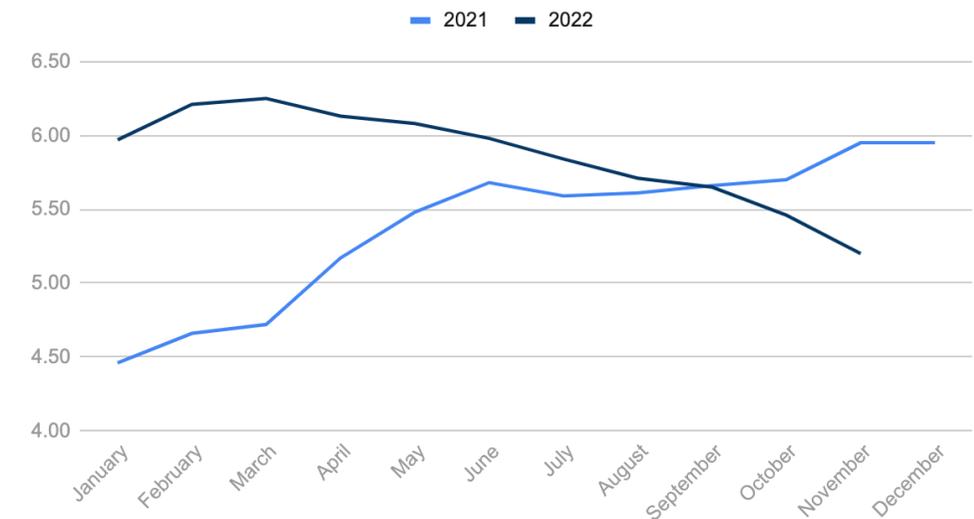
2023, but it is expected to grow production by the same amount. Japan, however, is expected to increase its beef consumption by 22 thousand mt, which could imply further reliance on imports as the country is not a major beef producer.

FAO Meat Price Index



Source: Tridge and FAO

Beef Prices in Australia (\$/kg)



Source: Tridge and World Bank

FCOJ Prices Rally Amid Record Low Orange Crop in Florida

Frozen orange juice concentrate (FCOJ) futures in the US rose significantly following the devastating effect of Hurricane Ian in Florida, between the 23rd and the 30th of September. Early estimates show that farmers could suffer agricultural losses of up to \$1.5 billion, with \$300 million affecting the citrus industry. FCOJ prices surged to \$2.18 per pound in September, the highest on record at that date, as the market reacted to the dark cloud over the Sunshine State. Prices have remained bullish, rising to \$2.24 per pound for Jan-23 contracts on the 8th of December, a 57% increase compared to last year, surpassing the previous record set in September.

The state's citrus crop was expected to be the smallest since 1935 due to dry weather conditions and the crippling effect of the citrus greening disease. However, Hurricane Ian has worsened Florida's harvest, as the damage led to farms flooding, trees

getting uprooted, and oranges dropping from branches. In parts of the state, such as Polk, Highlands, Hardee, and DeSoto, up to 90% of the crop was affected. In South Florida, the damage was severe, and industry experts anticipate that many farmers may sell their farms to cut costs.

Farmers may opt not to hire seasonal workers this season, given the low harvest figures, and will have to strategize on replanting the damaged trees, which could take up to five years to produce a decent crop. The most recent estimate of 28 million boxes, significantly lower than the 41 million boxes harvested last year, is likely to be revised further downwards to account for the losses suffered. Consequently, FCOJ production could drop significantly this year.

In September, US stockpiles of FCOJ plunged by 43% compared to the previous year, the lowest level since 1977. This supply crunch has kept



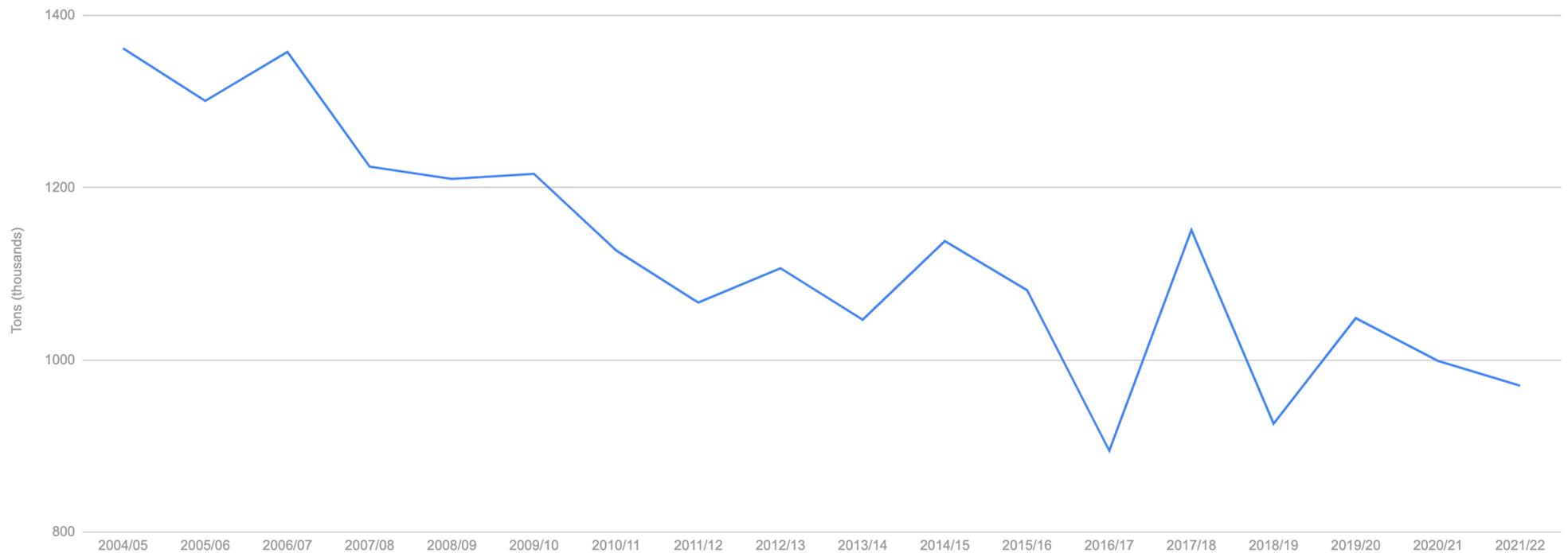
prices bullish, with futures rising above \$2.00 per pound in Oct-22 for the first time since 2016. To meet consumer demand, the country is expected to import record amounts of orange juice this season, which could bode well for major suppliers such as Mexico and Brazil. Last year,

US imports grew by 45% and 6%, respectively. The country also increased its FCOJ purchases by 27% and is set to increase significantly this season.

This supply crunch could result in FCOJ futures remaining elevated for

the season. The category-4 hurricane lasted only a few days in September, but the impact will stay for years.

Brazilian FCOJ Exports (66 Brix Equivalent)



Source: National Association of Citrus Juice Exporters

ABOUT US



ABOUT TRIDGE

Tridge is a Global Trade Ecosystem in the food and agriculture industry that combines professional network and data intelligence and makes trustworthy and sustainable cross-border trades possible.

We create and provide a very unique and powerful global-scale platform for buyers and suppliers to be connected and do business with each other more confidently and seamlessly.

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