



Food and Agriculture Organization of the United Nations

Major Tropical Fruits Market Review February 2020 snapshot

This snapshot describes the market situation and highlights the medium-term projections for world major tropical fruit markets for the period 2020-2029.¹ Production, consumption and trade developments for mangoes, pineapples, avocados and papayas are discussed.² The snapshot includes an introductory discussion of the key characteristics, opportunities, as well as risks and uncertainties that may shape world major tropical fruit markets during the outlook period. The projections were prepared in January 2020, before the outbreak of the COVID-19 pandemic, and as such do not take the potential manifold impacts of the disease mitigation measures on production and trade into account. While disruptions to labour and transport threaten to affect global supply in the short term, prospects over the medium term depend on the recovery path of the global economy. FAO continues to monitor the current market situation and any adverse effect of COVID-19 on global tropical fruit markets closely. A detailed assessment of both current developments and the outlook will be forthcoming.

Global production of tropical fruits has been growing steadily over the past decade, predominantly in response to increasing demand in the major producing areas. An estimated 99 per cent of tropical fruit production originates in low income countries, mostly cultivated at subsistence rather than commercial level by smallholder farmers who typically are endowed with, or have access to, less than 5 ha of land. As such, tropical fruits contribute directly and importantly to food security and nutrition in most producing zones. Given the high perishability of tropical fruits, especially those that are harvested when ripe, only a small fraction of total tropical fruit production is traded in national markets, and an even smaller one in international markets. Nevertheless, in light of rising incomes in key producing and importing regions, the role of tropical fruits in nutrition has made significant advancements over the past decade, which is

reflected in rising world per capita consumption for all four major tropical fruits.

While unprocessed, fresh or dried tropical fruits occupy a comparatively niche position in global agricultural trade in volume terms, accounting for a mere 3 per cent of world agricultural food products exports, their high average export unit value of well above USD1,000 per tonne places them as the third most valuable fruit group globally, behind bananas and apples. Furthermore, export volumes of the four major fresh tropical fruits – mango, pineapple, avocado and papaya – have displayed the fastest average annual growth rates among internationally traded food commodities, significantly outpacing growth in major food markets, notably cereals, livestock products, vegetable oils, sugar, and other fruits and vegetables. As such, trade in tropical fruits has the potential to generate substantial income to

¹ Minor tropical fruits, which are produced and traded at significantly lower volumes, such as lychees, durians, rambutans, guavas passion fruits, are not included in this snapshot.

² Trade data refer to trade in fresh or dried major tropical fruits as per their respective HS-code definitions.

smallholder producers, as well as significant export earnings for many of the producing countries, thereby further contributing to their food security.

Given the perishable nature of tropical fruits in production, trade and distribution, environmental challenges and insufficient infrastructure continue to be among the key obstacles to sustaining production and ensuing international markets are supplied. This is a particularly acute challenge since the vast majority of tropical fruits are produced in remote, informal settings, where cultivation is highly dependent on rainfall, prone to the adverse effects of increasingly erratic weather events and disconnected from major transport routes. The subsequently presented projections presuppose normal weather, and exclude the impacts of climate change, established and emerging plant diseases as well as events such as the El Niño weather phenomenon, which periodically affect production in the Latin American region. The effects of climate-driven changes in global tropical fruit area, changes in actual and attainable yields as well as the impact of increased frequencies of extreme weather events on production and trade could be assessed by making respective changes to the model specifications and will be the subject of future research.³

Growth in global production of tropical fruits over the outlook period is assumed to be predominantly driven by area expansion, supported by higher per hectare returns compared to competing crops. Income growth and changing consumer preferences in both emerging and high-income markets, meanwhile, will act as the main factors facilitating growth in trade, alongside improvements in transport and supply chain management. Against this background, the projections indicate that tropical fruits will continue to be among the fastest growing sectors

in agriculture, and as such deserve attention from policy makers looking for sources of economic growth and poverty alleviation in rural areas of tropical countries, as well as for improvements in the availability of vital nutrients globally.

Mango, mangosteen and guava⁴

Market Situation

Global exports of fresh mangoes, mangosteens, and guavas are estimated to grow to 2 million tonnes in 2019, an increase of 23 per cent from the previous year. This places the commodity cluster as the fastest growing group among the major tropical fruits in 2019. The main driver of this strongly positive development is a near 90 per cent expansion in exports from Thailand, which are estimated to reach 480 000 tonnes in 2019. Exports from the country benefited from exceptionally fast growth in import demand for mangosteen from China, with shipments increasing by a reported 265 per cent year-on-year between January and October 2019, to a total of 289 000 tonnes. Rising incomes and changing consumer preferences in China can mainly be considered accountable for this expansion, with mangosteen particularly sought after due to the fruit's assumed health benefits. At an average export unit value of USD 1300 per tonne for shipments from Thailand to China during the first ten months of 2019, mangosteen ranks among the most valuable tropical fruits available in global markets.

Projection highlights

Global production of mangoes, mangosteens and guavas is projected to reach 72.8 million tonnes by 2029, increasing at 2.9 per cent p.a. over the next decade. As the native region of mangoes and mangosteen and the largest production region, Asia is expected to hold a volume share of 71 per cent in global production in 2029, and a per capita consumption of 12.1 kg, from 9.8kg in the base

³ Most recently, an alternative simulation was run to assess the potential economic impact of the Banana Fusarium Wilt Tropical Race 4 disease on global banana production and trade. The results of this scenario were published in the November 2019 issue of FAO's biannual publication Food Outlook (<http://www.fao.org/3/CA6911EN/CA6911EN.pdf>).

⁴ International commodity classification schemes for production and trade do not require countries to report the fruits within this cluster separately, thus official data remain sparse. It is estimated that, on average, mango accounts for approximately 75 per cent of total production volume, guava for 15 per cent and mangosteen for the remaining 10 per cent.

period. Income growth and associated shifts in dietary preferences in the two globally leading consuming countries, India and China, will be the main factor behind this rise. The two countries are expected to experience increases in per capita consumption of between 2 to 3 per cent p.a. over the outlook period, reaching 17.6kg and 4.3kg in 2029, respectively. Mango production in India is destined largely for local informal markets and is projected to account for 26.7 million tonnes in 2029, or 36.6 per cent of global production. China, whose domestic mango production is comparatively low at a projected 5.8 million tonnes in 2029, is expected to see import growth of 5.1 per cent p.a. on account of strongly increasing demand for mangosteen, reaching an overall global import volume share of 21 per cent in 2029. Chinese demand for mangosteen is expected to be predominantly met by an increase in imports from Thailand, the largest global exporter of this fruit and second leading player in this commodity cluster overall. Mexico as the leading supplier of mangoes globally is expected to benefit from further growth in import demand from its major market, the United States of America, and register 4 per cent growth p.a. over the outlook period, to reach a global volume share of 25.7 per cent in 2029.

Pineapple

Market Situation

On the back of another year of ample supplies, global exports of fresh pineapples are estimated to rise to 3.2 million tonnes in 2019, following growth of 5 per cent from 2018. This expansion is mainly due to a 50 per cent increase in exports from the Philippines, the second largest supplier of pineapples to world markets. Following substantial investments into area expansion and productivity, exports from the Philippines are set to rise to an estimated 670 000 tonnes in 2019, thereby reaching an approximate 21 per cent global market share. Data available until September 2019 indicate that, in addition to higher supplies, exports of pineapples from the Philippines further benefited from a strong increase in import demand from China. Over the first nine months of the year, shipments to China reportedly reached 172 000 tonnes, a 122 per cent

increase compared to the same period in 2018. Filipino pineapples of the MD2 variety are well received by the Chinese market due to their high brix levels and the fact that supplies are available year round, while domestic Chinese production remains largely restricted to a 2 to 3 month harvesting period between March and May. Exports from Costa Rica, the world's largest producer and exporter of pineapples, meanwhile, were substantially hindered by excessive rainfall throughout the year as well as destructive tropical storms in the fall of 2019. Overall, shipments from the country are anticipated to decline by approximately 8 per cent, down from 2.1 million tonnes in 2018 to slightly below an estimated 2 million tonnes in 2019.

Projection highlights

On account of a 2 percent expansion in harvested area, global production of pineapple is projected to grow at 2.3 per cent annually, to reach 33 million tonnes by 2029. Among the major tropical fruits, pineapple is the least concentrated in terms of geographic distribution, with no single country producing more than 12 per cent of global output. Asia is positioned to remain the largest producing region at a global volume share of 41 per cent, thanks to sizeable production volumes in the Philippines, Thailand, India, Indonesia and China. Except in the case of the Philippines, which exports approximately 16 per cent of its production, pineapple cultivation in Asia predominantly caters to domestic demand and is expected to grow in response to changing demographics and income growth. Similarly, pineapple production in Latin America and the Caribbean, the second largest producing region at a projected 36 per cent global volume share, will be primarily driven by the evolving consumption needs of the region's growing and increasingly affluent population. Global exports of pineapple are expected to grow at 1.5 per cent p.a., to 3.6 million tonnes in 2029, predominantly on account of an equivalent rise in import demand from the United States of America. At a projected import volume of 1.3 million tonnes – equivalent of a 35 per cent global share – in 2029, the country is expected to remain the largest importer globally, ahead of the European Union, which is expected

to account for 28 per cent. In both key import markets, demand for pineapples is expected to continue to be driven by very low unit prices.

Avocado

Market situation

Global exports of avocado are estimated to reach a new height of approximately 2.3 million tonnes in 2019, following an expansion of 7 per cent from 2018. Ample global demand and lucrative export unit prices continue to be the main drivers of growth, stimulating substantial investments in area expansion in both major and emerging production zones. However, weather-related production declines in a number of producing countries, most notably in Peru and South Africa, hampered the overall potential of the market, which grew at a significantly lower rate than the 15 per cent annual average observed over the period 2014-2018. The leading exporter, Mexico, is estimated to register a slight increase in global market share of 2 percentage points, to 58 per cent in 2019, on account of area expansion, favourable weather and improved yields.

Projection highlights

Avocado has the lowest production level of this group of tropical fruits, but its output has been the fastest growing in recent years, underpinned by rapidly expanding import demand. Production is projected to slightly exceed 11 million tonnes by 2029 – more than two and a half times its level in 2009. Avocado production is concentrated in a small number of regions and countries, with the top ten producing countries accounting for over 80 per cent of global output and about 70 per cent of production taking place in Latin America and the Caribbean. In response to further rapidly rising global demand, output in Mexico, the world's largest producer, is expected to grow by 4.9 per cent p.a. over the next ten years. As such, and despite increasing competition from emerging exporters, Mexico is expected to further increase its export volume share in global markets, to 67.6 per cent in 2029. The United States of America and the European Union, where consumer interest in avocados is fueled by the fruit's assumed health benefits, are expected to remain the main importers, expanding their shares in global import

volumes to 50.5 per cent and 28.7 per cent in 2029, respectively.

Papaya

Market situation

Global exports of papayas are estimated to increase by 8 per cent in 2019, to approximately 310 000 tonnes, reflecting a recovery from the weather-related declines experienced in 2017 and 2018. As the largest global exporter of papayas, Mexico is estimated to expand shipments by 7 per cent in 2019, to approximately 170 000 tonnes. Exports from Mexico continue to be almost exclusively destined to the United States of America, which again absorbed a reported 99 per cent of Mexican papayas between January and September 2019. Despite the recovery in production and increase in exports over this period, Mexican shipments of papayas reportedly continued to be affected by recurring contamination with several strains of the salmonella bacterium, which had first been reported in August 2017.

Projection highlights

Global papaya production is projected to rise by 2.1 per cent p.a., to 16.6 million tonnes in 2029. The strongest growth is expected to be experienced by Asia, the leading producing region globally, whose share of world production is set to rise from 59 per cent in the base period to 61 per cent in 2029. The world's largest producer, India, is predicted to increase papaya production at a rate of 2.4 per cent p.a., thereby expanding its global volume share to 48 per cent by 2029. Income and population growth will be the main factors behind this rise, with Indian per capita consumption of papayas expected to reach 5.5kg in 2029, up from 4.4kg in the base period. Global exports will predominantly be shaped by production expansion in Mexico, the largest global exporter of papayas, and higher demand from the key importers, the United States of America and the European Union. However, a major obstacle to a significant expansion in international trade remains the fruit's high perishability and sensitivity in transport, which renders produce fairly unfit for supply to far afield destinations. Innovations in cold chain, packaging and transport

technologies promise to facilitate a broader distribution of papaya, particularly in view of rising

consumer demand for tropical fruits in import markets.

