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Five-Year Walnut Market Outlook

Will Demand Grow to Match Supply and Competition?

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Summary

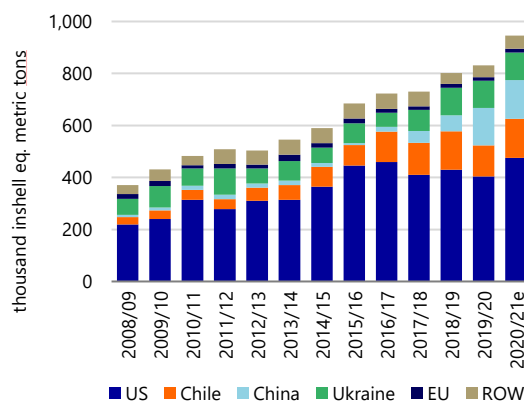
- Global walnut production and exports will set records during 2020/21. This will impact the US market, as it relies heavily on exports.
- US production is at record levels but will likely remain in check due to lack of price incentives. We provide production and price estimates for the next five years.
- We estimate that US exports will continue to grow in the next five marketing seasons, but the challenge of boosting domestic demand will continue.
- Maintained high-quality product, research, innovation, and marketing are needed to enable the US walnut industry to continue surmounting international competition in the walnut market and increased competition in the tree nut space.

Main Market Trends in a Nutshell

Global walnut production will likely set a new record of almost 2.3m metric tons – inshell basis – during the 2020/21 marketing year. This production level represents a 7% increase year on year and roughly 5% growth compared to the previous production record in 2016/17. More than 80% of 2020/21 global walnut production will come from three countries: China, the US, and Chile, with shares of 45%, 31%, and 7%, respectively. Other walnut producers are the EU, Ukraine, Turkey, India, and Australia. Production out of the US and Chile is expected to grow about 20% YOY, setting new records, while production in China has recovered after a 15% drop in 2018/19.

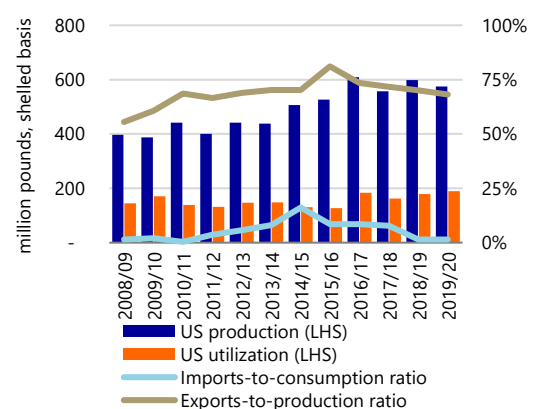
Higher global production will build increased international competition in the export market. Global walnut exports are projected to grow about 14% YOY during 2020/21, with exports out of the US expected to grow about 18% YOY and exports from Chile growing roughly 25% YOY. The US and Chile were the largest walnut exporters during the last few years. But the fast growth of exports from China, which is rapidly capturing market share, has been disruptive to the market and has surprised some analysts. China is now competing for second place as a walnut-exporting country (see Figure 1).

Figure 1: Global walnut exports by country



Source: USDA/FAS, Rabobank 2021

Figure 2: US walnut market indicators



Source: USDA/ERS, Rabobank 2021

International trade is critical for the US walnut industry, as around 70% of US production has been exported in recent years. Imports have not played a relevant role in the US market over the last few marketing seasons (see *Figure 2*).

US Shipments Keeping Pace in 2020/21, But...

Total US walnut supplies, composed of carry-in plus marketable crop, will be about 836,000 inshell equivalent short tons, or a YOY increase of roughly 17% in 2020/21. While carry-in was down 3% YOY, marketable crop increased by 19% YOY.

During the first third of the 2020/21 marketing year – period from September to December – total US walnut shipments were up about 15% YOY, with exports increasing 19% YOY and domestic shipments growing 6% YOY. Year to date, total shipments account for about 40% of total US walnut supplies for the year, a similar pace to that in the previous two marketing years. Exports have accounted for approximately 71% of total US shipments so far this season. While shipments have been strong, grower prices have been considerably lower compared to the prices received during the previous crop year. In the next sections, we present our outlook for the following five marketing years.

Are More Bumper Crops Looming?

We developed a proprietary analytical tool¹ to estimate US production, US shipments, and US average grower prices, taking into consideration relevant underlying variables. On the production side, our estimates are a function of bearing acreage and yields, which are functions of planted acreage and age of trees. Yield variability – weather risk – is captured by the probabilistic nature of the model.

Estimated bearing acreage in 2020/21 increased by 4.1%, the lowest growth rate in the last five seasons. According to official figures, since 2016/17 newly planted acreage has been considerably lower compared to the levels observed during the decade before that. We expect that, on average, bearing acreage may grow at modest rates during the next five crop years. It is also likely that current low prices create enough incentive to even reduce bearing acreage, particularly of lower-value varieties, in some areas in years to come.

The 2020/21 US walnut crop is, per the USDA objective measurement report, estimated at 1.56bn pounds (780,000 short tons), a record crop, up 19% YOY. The final crop number may be slightly lower than this. Yields in 2020/21 were exceptionally high. For our production prospects, we use a yield probability distribution based on historical values. Our expected production levels show more average yields going forward. However, having average yields in every year is highly unlikely. Higher percentiles included in our production estimates show the likely ranges should higher yields be achieved. Hence, it is possible that we will observe a new record crop in the next few years.

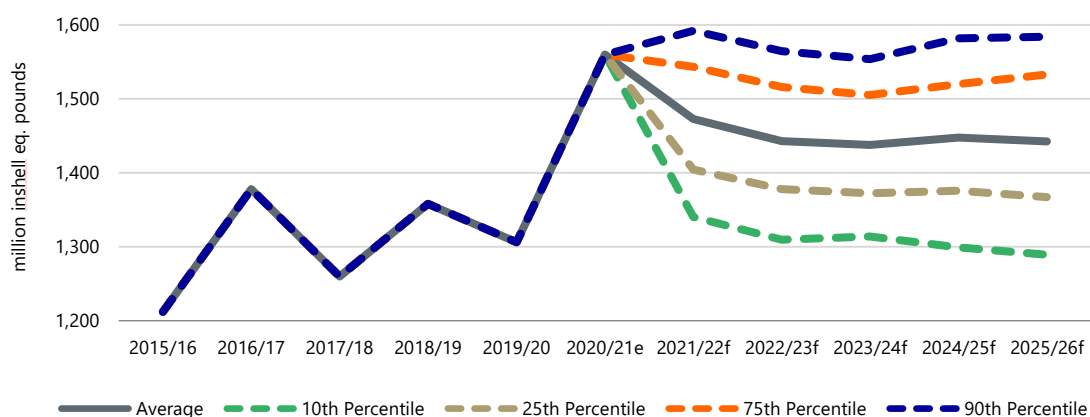
We provide a range of walnut production estimates for the period spanning from 2021/22 to 2025/26 marketing years (see *Figure 3*). Overall, we estimate that annual US walnut production is likely to remain at higher levels than the 2019/20 crop size during the aforementioned period. On the other hand, the estimated probability of obtaining annual production higher than the current record crop during any specific year is about 10% (90th percentile).

Our average production estimate for 2021/22 is 1.47bn pounds, roughly a 6% drop with respect to the record-setting crop in 2020/21. We calculate a 50% probability that production in 2021/22 will be between 1.4bn pounds and 1.54bn pounds. Our estimates show about a 90% probability that production will be roughly 1.34bn pounds or higher (10th percentile) this coming season.

¹ Stochastic partial equilibrium model.

The average US walnut production estimate for the period 2021/22-2025/26 is around 1.45bn pounds, roughly 11% higher than the observed production level during the 2019/20 marketing year. Percentiles show likely walnut production outputs depending on yield and acreage dynamics (see Figure 3).

Figure 3: US walnut production and production estimates, 2015/16-2025/26f



Source: USDA, California Walnut Board and Commission, Rabobank estimates 2021

A Question Mark on the Demand Side

The main export markets for US walnuts are European, Asian/Pacific, and Middle Eastern countries. The US walnut industry will likely face increasing competition from China in most of these markets. Some relevant markets for US inshell walnut exports include: Turkey, the UAE, Italy, Pakistan, India, Vietnam, Spain, and Germany. Main destinations for US shelled walnut shipments are the following: the US domestic market, Germany, Japan, South Korea, Spain, Israel, and the Netherlands, among others.

US inshell walnut export volume has grown at a CAGR of about 5% during the recent decade. Turkey is the most important single-country market for US inshell walnuts, accounting for about 27% of US exports in the category. With a share of 14% of US inshell walnut exports, shipments to the UAE have grown at a CAGR of about 24% during the last ten years, making this the most dynamic market for inshell product, per USDA figures. Shelled US walnut exports have grown at a CAGR of about 7% over the last decade, according to USDA numbers.

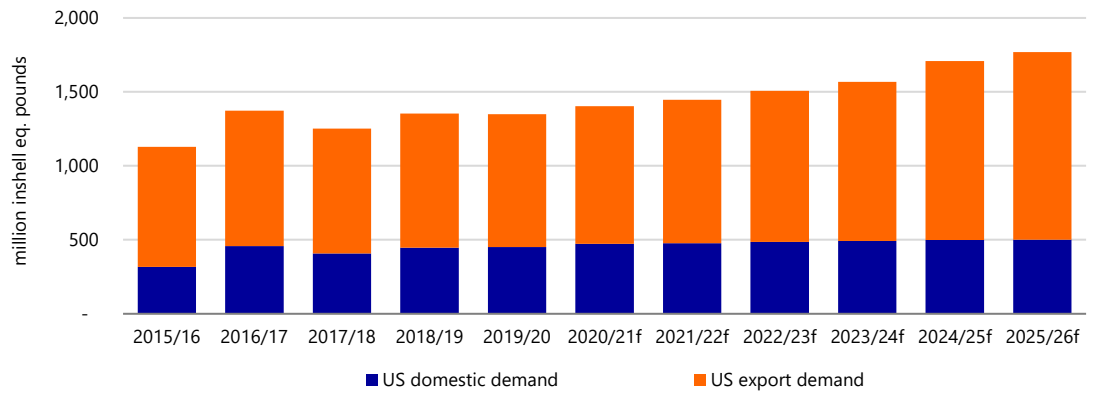
In order to obtain demand prospects, we estimated demand for both domestic and international markets. These demands are a function of real prices, per capita GDP, and other relevant economic variables. We also accounted for risks in the system. In terms of retaliatory tariffs on US walnuts going into some Asian markets, we assumed as our baseline that these will remain in place for two more marketing years. In this report, we present our average shipment estimates without including shipment percentiles or inventory adjustments/losses (see Figure 4).

According to USDA reports:

The growing popularity of healthy snacking, higher incomes, and global market dynamics are making the EU nut market more attractive than ever. The wide gap between EU walnut production and imports provides excellent opportunities for walnut exporters. The US continues to be the number one supplier of walnuts, both inshell and shelled. The EU imports various types of nuts for direct consumption as well as for further processing and re-export within the region in different forms, such as salted, baked, fried and mixed nuts.

In our estimates, the EU remains the top destination for US walnut exports over the next several years.

Figure 4: US walnut shipments and average shipment estimates, 2015/16-2025/26f



Source: USDA, California Walnut Board and Commission, Rabobank estimates 2021

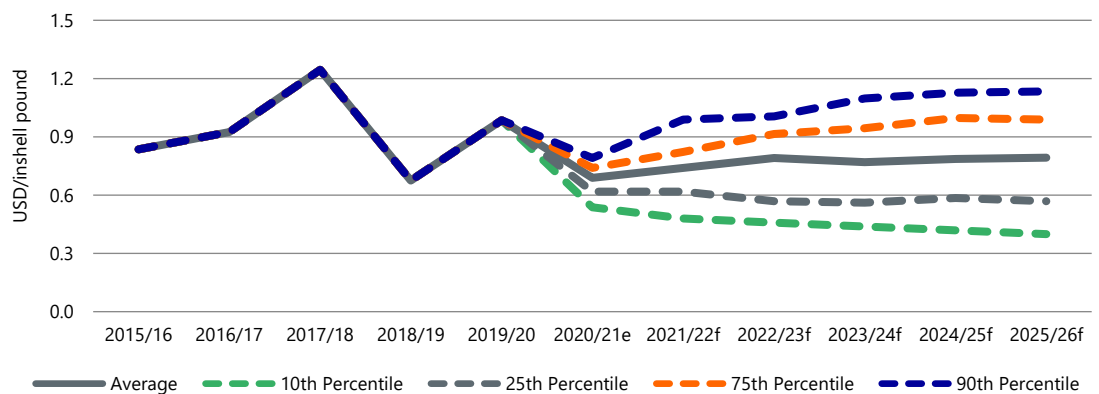
Keep in mind that global demand growth is expected to continue, but lower prices are partially fueling this trend of growing shipments.

Downside Price Risk May Linger

While US walnut shipments are keeping pace in the current season and we are projecting a growth in shipments in the longer run, the relevant question remains: at what price?

Our average blended price to the grower for the 2021/22-2025/26 period is around USD 0.78 per inshell pound. As an example of how to interpret our price estimates, for the 2022/23 marketing year there is a probability of 50% that the average (blended) price will be between USD 0.57 and USD 0.91 per pound (25th and 75th percentiles). Also, the estimated probability of observing prices north of USD 1.00 is about 25% for the 2024/25 marketing year and forward (see Figure 5).

Figure 5: Average US walnut prices and price estimates, 2015/16-2025/26f



Source: USDA, California Walnut Board and Commission, Rabobank estimates 2021

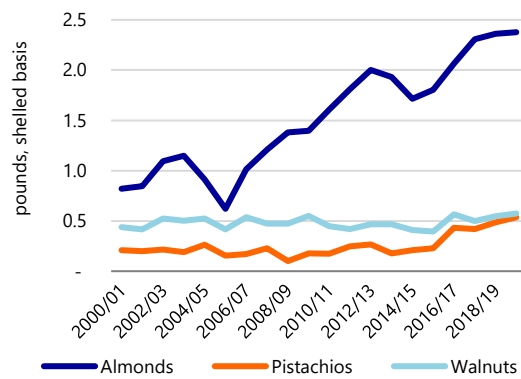
Given a combination of higher demand and/or lower production (i.e. yield shocks), prices would sit at the higher range of estimated percentiles. These are average annual price estimates, so prices for specific varieties, handlers, and regions would differ.

Is Walnut Demand Growing Fast Enough?

On a global level, walnuts have been the most widely consumed tree nut. However, during the last decade, the consumption growth of almonds and pistachios has outpaced that of walnuts, both globally and domestically in the US. The growing popularity of tree nuts is a positive factor for the category as a whole, but it has not necessarily materialized in augmented walnut consumption in the same proportion as in competing tree nuts, as consumers will only spend so many dollars in the category.

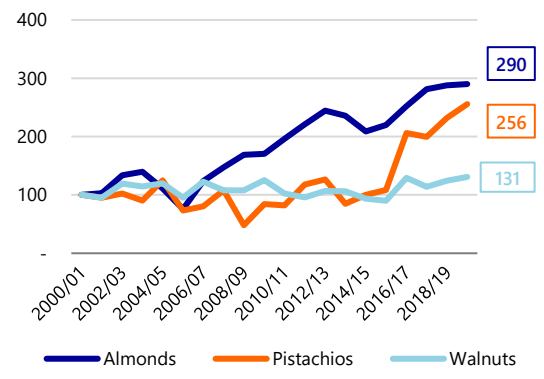
Particularly in the US market, the per capita consumption for the main tree nuts shows differentiated trends over the last two decades. Whereas walnut per capita consumption in the US has grown about 30% in the last 20 years, the consumption of almonds has grown almost 200% and pistachios more than 150% (see Figures 6 and 7). The main growth in pistachio consumption has taken place in the last five years, propelled by research and innovation in marketing. We identify factors such as healthfulness, convenience, and taste as important demand drivers in the tree nut category overall.

Figure 6: US per capita tree nut use



Source: USDA/ERS, Rabobank 2021

Figure 7: US per capita tree nut use (2000=100)



Source: USDA/ERS, Rabobank 2021

Research and Marketing Are Key

We don't want to downplay the challenges in the production side of the equation, as growers will continue to face increasing environmental and water regulations, which contribute to increasing production costs. Continued production of high-quality walnuts under more efficient production systems will remain imperative, and the industry has shown that it is possible to achieve that. Nevertheless, boosting demand in domestic and export markets for the growing US output amid increased international competition is yet another formidable challenge.

Walnuts have a high protein content as well as an elevated level of healthy fatty acids. Although a versatile tree nut that can be used as an ingredient for cooking, baking, or snacking, many consumers consider walnuts to be primarily an ingredient. Industry reports show that the perception of walnuts in terms of convenience and value has improved over the last few years. In some markets, "more consumers are increasingly purchasing walnuts all year round due to their perceived nutritional benefits. These healthy snacking trends are expected to continue driving consumption. The ongoing release of scientific studies and research highlighting cardiovascular benefits has made walnuts very popular among health-conscious consumers," according to a USDA report. Continuing research on health and identifying new and innovative ways to use walnuts seem imperative. Also, finding ways to increase consumer demand for walnuts as a healthy snack is an ongoing challenge for the industry.

As baking and cooking at home increased since the Covid-19 pandemic started, higher demand for walnuts at retail may have partially compensated for the loss in the foodservice channel. A couple of trends may positively impact walnut demand: 1) continued working remotely and home baking, and 2) an increase in plant-based diets, which is likely a more permanent demand shift.

Creating global and domestic strategic partnerships with manufacturers to include more walnuts in different foods and snacks will be increasingly relevant to ensure US walnut marketers find a home for their product. Consumer food companies and product manufacturers can take advantage of plant-based diet trends by including (more) walnuts in their products and promoting the healthfulness of walnuts. In the upstream value chain, the fact that walnut prices may remain close to the breakeven level for some growers could drive increased consolidation and vertical integration.

Imprint

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