

**A Brief Assessment of the Direction
of Global Walnut Markets**

Sept. 2, 2024, Lisbon






About NutVision:

With its principal offices in **Lisbon**, Portugal, **Nisão-NutVision** stands at the forefront of nut harvesting and processing innovation, providing comprehensive solutions tailored to empower nut growers and processors, regardless of their scale. Our expertise lies in delivering systems that not only enhance product quality but also significantly reduce energy, labor, and operational costs. Through our integrated approach, we are committed to streamlining operations and driving efficiency across the board, making **Nisão-NutVision** a trusted partner in the nut industry.

Our Comprehensive Services

Planning is the most important part of establishing a successful agricultural business, especially in a long-term project such as a walnut plantation. We have carefully managed this process for more than 2,500 hectares of walnut plantations for our clients across Europe. From financial feasibility studies and orchard establishment to harvesting mechanization and processing plants, **Nisão-NutVision** is here to support you with all your needs, ensuring you begin with the right planning and strategy. Our comprehensive services include:

- Harvesting mechanization
 - Integrated walnut processing plant design and turnkey establishment
 - Financial studies and business plans
 - Orchard planning and establishment
 - Enhancing productivity, efficiency, and quality
 - International marketing and brand development
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The **2024 California Walnut Objective Measurement Report (CWOM)**, arguably the most comprehensive report aiming to reflect the state of the upcoming walnut harvest in California, will be released in a few days, on Wednesday, September 4, as traditionally scheduled for 12:00 Pacific Time. As I anticipate the key highlights of the report, I decided to draft this article on the Sunday prior to its release. The ideas I share are purely based on my personal observations and the numerous exchanges I've had with a large number of growers and industry players.

As always, the report will provide insights that are crucial for stakeholders in the walnut industry, not only with metrics such as walnut sizes, kernel quality, and the estimated production volume for the harvest season, and thus expectations on market trends, but—if I am not mistaken with the ideas I will explain below—more importantly, it will shed light on the **imminent shift** in the global walnut supply chain.

Growing as an Industry:

For more than 40 years, **California** has been the **epicenter of the global walnut industry**, setting benchmarks for production, quality, and innovation. The state's success has been propelled by a well-coordinated network of highly specialized players, each contributing to the formation and operation of a robust and **efficient supply chain**.

At the heart of this success is **UC Davis**, the source of all current know-how in commercial walnut production. **UC Davis** has continuously developed more efficient rootstocks and varieties while providing invaluable knowledge on new techniques that enhance productivity, quality, and cost efficiency.

California's exceptional **Nursery and Tissue Culture Industry** not only supplies the entire state but also supports enthusiastic growers in numerous other countries (myself included) with reliable **plants, rootstocks, and genetic materials**.

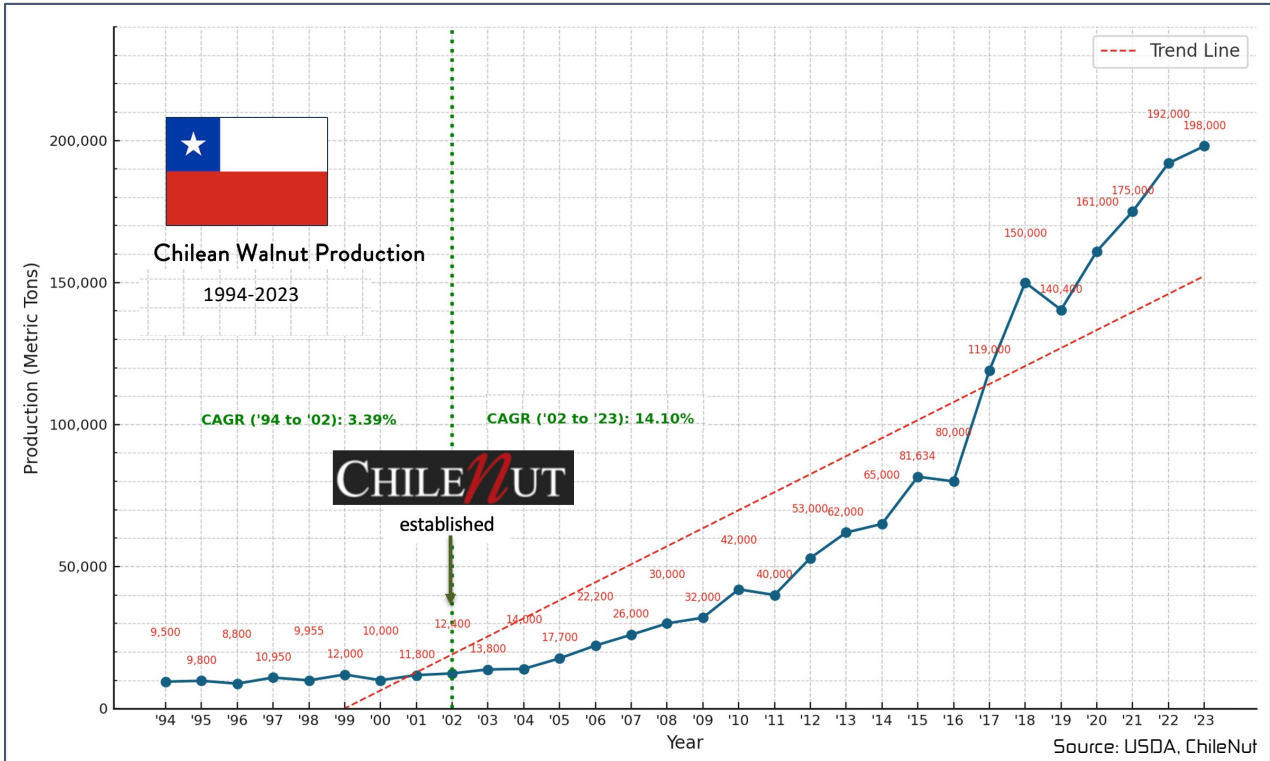
California's Processing Industry stands out as likely the only one in the world where efficient facilities operate for dozens, if not hundreds, of growers, as opposed to the small in-house processing lines commonly found elsewhere.

Finally, the **California Walnut Board**, established in 1948 under the authority of the U.S. Department of Agriculture, represents all walnut growers and handlers in **California**. It acts as the governing body of the entire industry and determines strategic initiatives, the most important of which is the formation of this super-efficient industry model. This "**All-Star**" structure has created the first real national walnut industry that is strong, efficient, and competitive in every parameter.

To see the major effect of this efficient and well-organized industry structure, look no further than **Chile**. **ChileNut**—the **Association of Producers and Exporters of Nuts of Chile**—was established in 2002, when with a little over 10,000 metric tons of production, Chile did not even exist on the Global Walnut Production Map. Operating with a similar strategy that has successfully worked in **California**, **ChileNut** focused on developing a self-supporting industry rather than creating a few champion operations. As stated on **ChileNut's** website:

*"The Chilean walnut industry has become the **second biggest in exports to all the world** and the **third biggest producer**. This implies many responsibilities and challenges that are better taken care of **with unity, with the objective of pushing the entire industry forward, setting clear objectives, and positioning Chile as the best source of walnuts to the world.**"*

Chilean Walnut production grew by **more than 21 times** between 1994 and 2023, from 9,500 to 198,000 tons. What is particularly interesting is that the growth between 1994 and 2002—the year ChileNut was established—was only 30% (or 3.39% per year), whereas the growth from 2002 to 2023 is **1,600%** compounded (or 14.10% per year). (Chart 1)



The Shift:

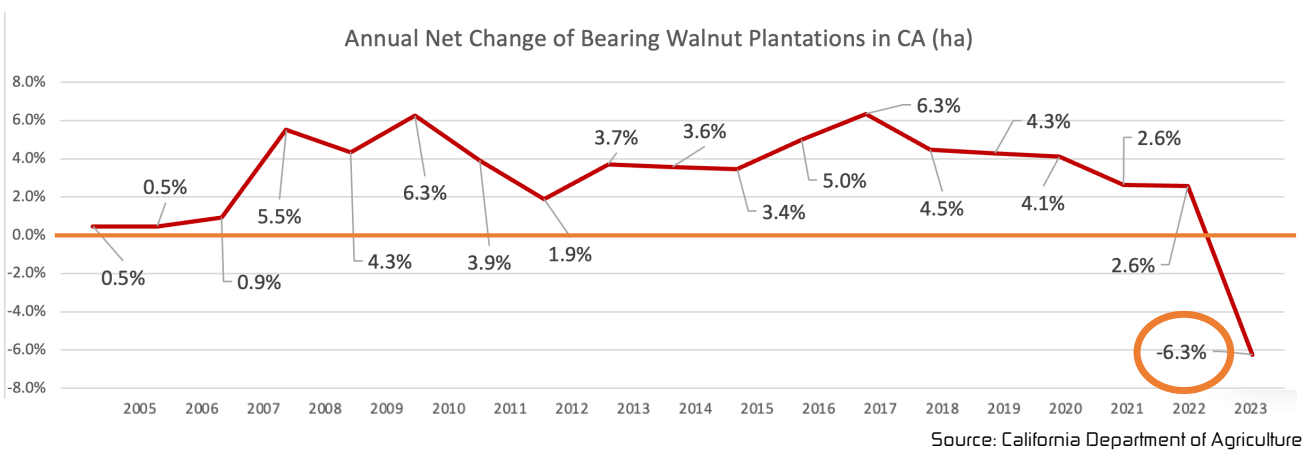
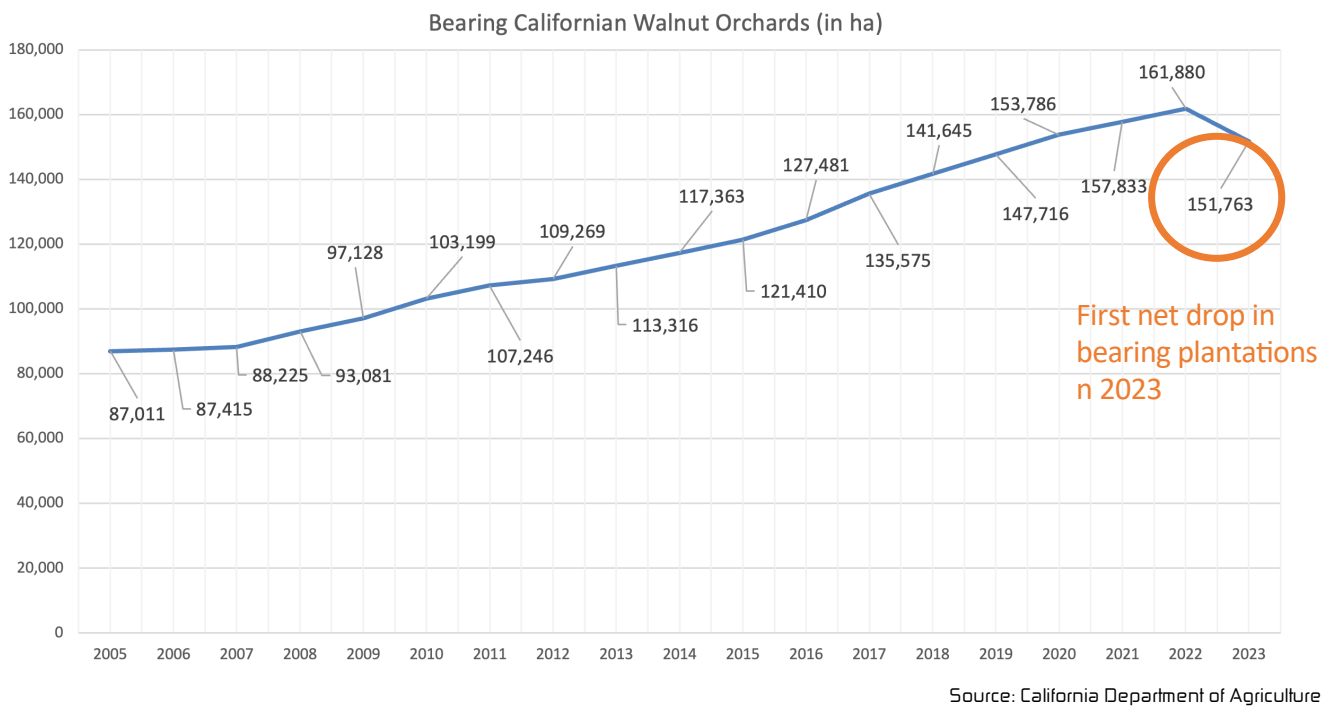
As a walnut professional, investor, consultant, and above all, a walnut enthusiast, I have witnessed the painful evolution of the walnut industry in Europe and the Middle East over the past two decades. Despite numerous failed attempts and bold investments that seemed destined to fail even before planting, successful production operations have finally begun to emerge in the EU, Ukraine, Moldova, Turkey, Serbia, and Bulgaria. These successes have been achieved by a group of curious and **detail-oriented individuals** who, rather than trying to reinvent the wheel, have implemented the **proven methods** developed by the Californian industry. However, without the structured industry and specialized partners found in California, these projects have had to navigate many challenges independently.

While many of these **European** operations still struggle to match the productivity and cost competitiveness of their **Californian** counterparts, I believe the global walnut market is on the brink of significant changes. The **Californian** walnut industry, despite its near-perfect structure and massive scale, has been struggling with its own set of challenges for some time.

Rising labor costs, with the minimum wage expected to reach \$17 per hour in 2025, have significantly impacted Californian growers, who have long benefited from harvesting mechanization and are already working with very high labor efficiency. This challenge is particularly acute for them compared to their European counterparts, who are only now beginning to adopt these cost-reducing technologies and are bolstered by a workforce of migrants willing to work for below-minimum wages.

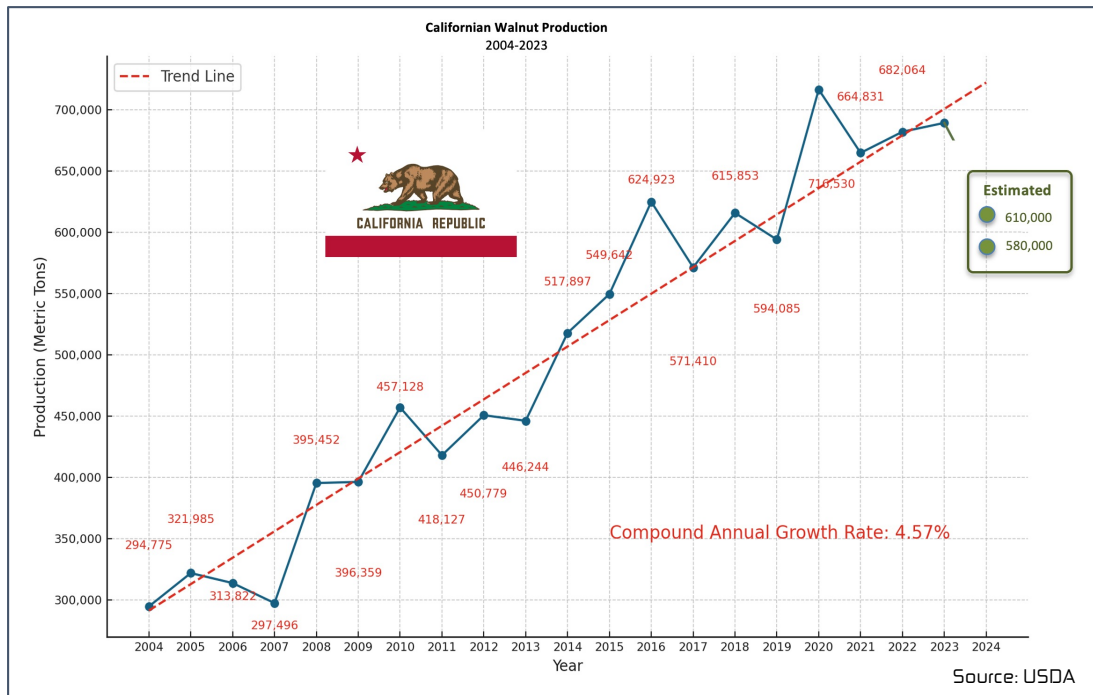
As if this weren't enough, growers across the **State of California** have been suffering from a **persistent drought** for more than a decade, despite having a few years with relatively better conditions. While this situation has been more severe in the South, where almond plantations are more prevalent than walnuts, it has impacted the entire state, forcing farmers to either **switch to alternative crops** that require less water or **abandon** their orchards altogether.

Global walnut prices have dropped significantly over the last 7-8 years, to a level **below the cost of production**, forcing many growers to remove their older plantations and convert them to other crops. Lastly, California has been experiencing extreme heat waves and wildfires, which have affected product quality more than volume.



The rate at which new walnut orchards are being planted in **California** has been declining steadily for several years. For the first time in over two decades, this trend has shown a **negative figure**, indicating that there are fewer harvested walnut orchards in California compared to the previous year. This marks a significant drop of more than 10,000 hectares, equivalent to **6.3% of all walnut orchards** in the state.

It will not be a mistake to expect this trend of reduced harvested walnut plantations in California not only to continue but also to accelerate, with harvested areas **potentially declining in 2024 to as low as 140,000 hectares (an additional 7% drop)**. This, combined with the extreme heatwaves that have been affecting the orchards, is likely to cause a significant drop in total production in 2024. For all these reasons, we anticipate production could fall to as low as 580,000 to 610,000 metric tons, compared to 682,000 tons in 2023.



With the shifting dynamics in California’s walnut industry, particularly the move towards alternative crops and the removal of walnut orchards, the global supply balance is set to change. Europe and the Middle East—the world’s largest walnut import markets—are beginning to rely less on walnuts from across the Atlantic. This trend will likely encourage more industry players with the right approach to follow suit. However, these individual successes do not diminish the importance of building national or regional industries with the same level of specialization I mentioned earlier. Grower organizations must prioritize establishing self-sustaining industry structures rather than focusing solely on championing individual growers, as demonstrated by the Chilean walnut industry.

Availability in the Market:

Despite a relatively successful year in 2023, during which Californian growers harvested nearly 690,000 **metric tonnes** of walnuts, the market is currently nearing a sold-out state. As of end of July, the Californian Domestic and Export sales total have exceeded 103 % of the total production in 2023. This figure was at 98 % in the same period a year ago. Walnut markets are about to begin an already low production year with a very low carryover inventory, which signals perhaps the first time in more than a decade where global production may not meet the demand. As with any part of the economy, the balance of supply and demand is expected to shift global prices from their current unsustainable levels.

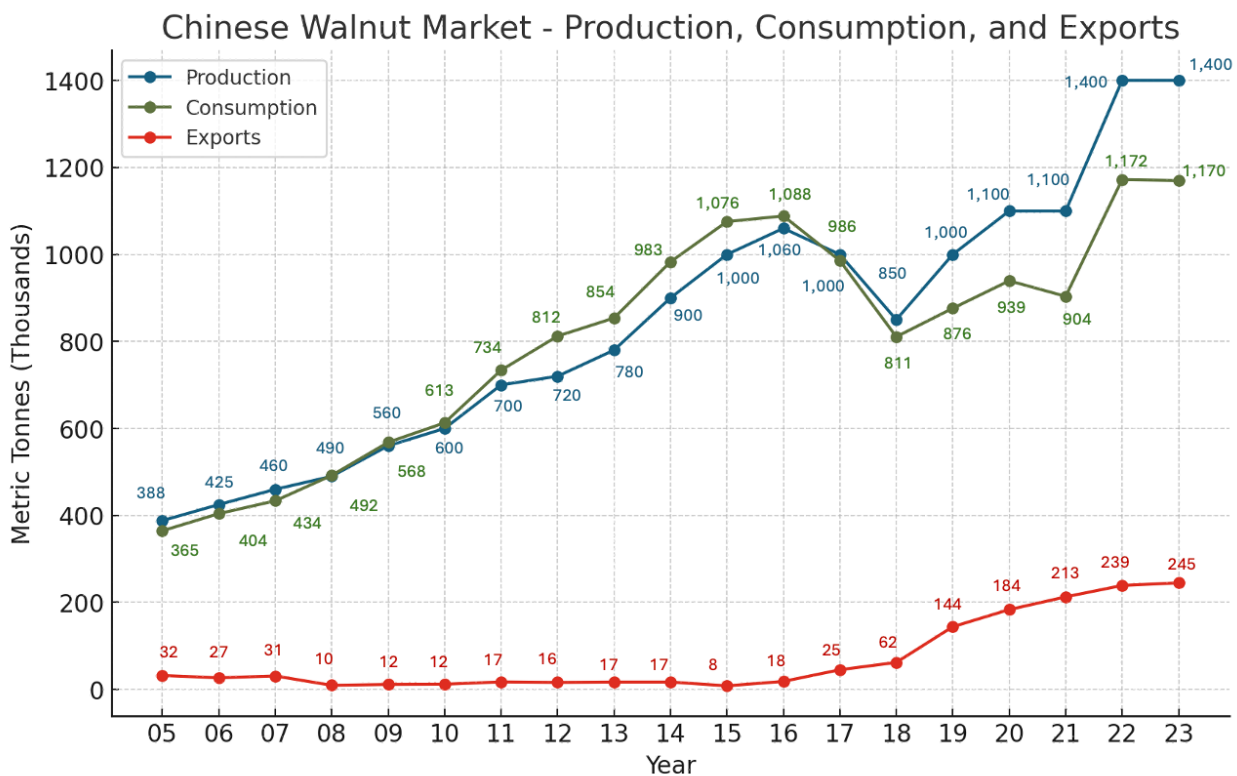
2024		Jul-24					Inshell Equiv. based on 41% s/o rate		
Production	US Tons		In-shell	Shelled	1,000 lbs	US tons	Total Sales		
Conventional	805,035	Domestic	16,574	240,218	602,472	301,236			
Organic	18,514	Export	308,439	321,085	1,091,573	545,787	847,022	102.9%	
Total	823,549								
2023		Jul-23					Inshell Equiv. based on 40.1% s/o rate		
Production	US Tons		In-shell	Shelled	1,000 lbs	US tons	Total Sales		
Conventional	747,870	Domestic	11,559	227,232	578,222	289,111			
Organic	0	Export	229,439	261,979	882,753	441,377	730,488	97.7%	
Total	747,870								

Source: California Walnut Board

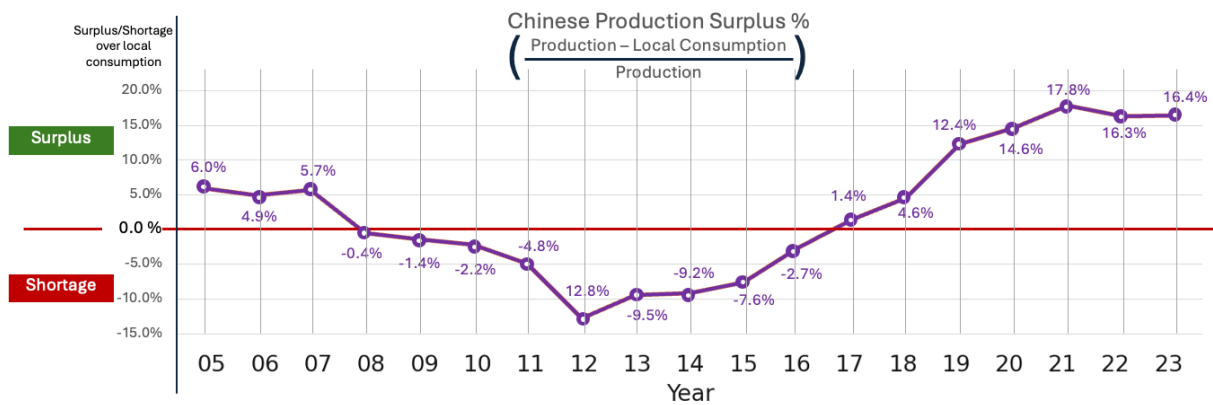
The Awakening Giant: CHINA

Despite historically being the world's largest walnut producer, China remained a net importer of walnuts until 2017, largely due to the deep cultural significance of walnuts rooted in the country's history. Furthermore, the statistics of Chinese walnut production and consumption has historically not been very reliable. Xinjiang Paper-Shell Walnut, Chinese reply to its Californian distant cousin Chandler, has gained popularity in more price conscious markets during the last 5 years, thanks to its ultra-thin shell, its high inshell yield ranging from 50-55%, but perhaps more importantly due to its unbelievably light shell color. In fact, the first time I saw one, I have mistaken it with the similar sized walnut shaped pencil eraser on my desk.

However, despite the superior characteristics of Chinese walnut varieties, their penetration into Europe, particularly the EU, has been limited. This is mainly due to concerns about taste and the use of chemicals during processing to enhance their appearance. For now, Chinese walnuts will likely continue to target the low-end markets in India and Turkey. However, these concerns must be effectively communicated to consumers by local grower unions, as Chinese walnuts could pose a threat to European growers. In a market where many chemicals are banned in walnut production, European growers are justified in demanding that imported walnuts adhere to the same stringent standards. Additionally, even slight improvements in the economies and disposable incomes of India and China—two major walnut-consuming countries that together account for more than 35% of the world's population—could quickly deplete China's growing walnut production in the coming years.



Source: USDA



As we are about to finish yet another walnut growing season, I wish all hardworking growers all over the world an easy, fast and fruitful harvest.

MB
 Mon, Sept. 2, 2024
 Lisbon