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Report Highlights:

FAS Lima forecasts Peruvian mandarin/tangerine production at 550,000 metric tons (MT), with exports expected to reach 200,000 MT for marketing year (MY) 2022/23 (March 2023 to February 2024). Lower profitability driven by labor cost increases, fertilizer scarcity, erratic weather, increased transportation costs, and container shortages will negatively impact production and exports. Citrus exports to the United States are expected to fall slightly to 121,000 MT. The United States will likely remain Peru's top partner.

The following table provides revised data for total Peruvian fresh mandarin/tangerine production, supply, and distribution (PS&D) for Peruvian (PE) marketing years (MY, March-February) 2021/22 and 2022/23, and the initial forecast for MY 2023/24. The MY mentioned above are equivalent to U.S. MY 2020/21, 2021/22 and 2022/23, respectively.

Table 1. Peru: Mandarins/Tangerines, Fresh Production, Supply and Distribution

U.S. Marketing Year	U.S. 2020/21	U.S. 2021/22	U.S. 2022/23
PE Marketing Year	2021/22	2022/23	2023/24
Market Year Begins	March 2021	March 2022	March 2023
Area Planted (HECTARES)	23,000	23,000	23,000
Area Harvested (HECTARES)	22,000	23,000	23,000
Bearing Trees (1000 TREES)	8,800	9,200	9,200
Non-Bearing Trees (1000 TREES)	400	0	0
Total No. Of Trees (1000 TREES)	9,200	9,200	9,200
Production (1000 MT)	540	570	550
Imports (1000 MT)	0	0	0
Total Supply (1000 MT)	540	570	550
Exports, Fresh (1000 MT)	215	220	200
Fresh Dom. Consumption (1000 MT)	300	320	320
For Processing (1000 MT)	25	30	30
Total Distribution (1000 MT)	540	570	550
(HECTARES), (1000 TREES), (1000 MT)			

*Note: There is a one-year lag between the PE MY and the U.S. MY. For example, PE MY 2023/24 is equivalent to U.S. MY 2022/23. To ensure data continuity, the current Peruvian MY 2023/24 will be referred to as U.S. MY 2022/23 throughout this report.

Production

FAS Lima expects Peruvian mandarin/tangerine production to reach 550,000 MT in marketing year (MY) 2022/23, decreasing 4 percent from the previous year. This decrease can be attributed to an increase in the cost of production (resulting from higher labor costs after 2020 modifications to Peru's Agrarian Law: [31087](#) and [PL06736](#)), fertilizer scarcity, and erratic weather conditions that will result in smaller fruit sizes. Peruvian mandarin/tangerine area is estimated at 23,000 hectares currently in production. Harvest season in Peru goes from March to November.

The major mandarin/tangerine production areas in Peru are in the central semi-tropical coastal regions with good availability of water. Production is centered in Lima, Junin, and Ica regions where climate is favorable for its production. There is also mandarin production in La Libertad, Arequipa, San Martin, Cusco, and Puno.

According to official data, Peru has more than 3,000 small producers with an average of three hectares. Practically all their production stays in the domestic market. Yields can range from 12 to 20 MT per hectare.

Peru's mandarin/tangerine production for export is predominantly done on industrial scale farms of 50 hectares or more. They use state-of-the-art drip irrigation systems that provide the precise amount of water and nutrients to maximize production. Yields on industrial scale farms are significantly higher than the smaller producers mentioned above.

Overall citrus yields in Peru average 24 MT per hectare.

Varieties are selected for high productivity and quality. Varieties in Peru include:

Satsumas (*Citrus unshiu*): Clausellina, Okitsu, Owari

Clementines (*Citrus reticulata*): Clementines, Clemenules

Hybrids: Fortuna, Kara, Pixie, Nova

Tangerines from *Citrus reticulata* and *Citrus paradise*: Murcott, Ortanique, Tango

Others: Dancy, Malvaceo, Nadorcott. Malvaceo and Rio de Oro are popular varieties with a long history in Peru.

The market is dominated by seedless varieties. Most of the plant stock for exports from Peru are sourced from patented nurseries with genetics from Israel, Spain, and the United States.

According to industry sources, mandarin/tangerine production faces production volume challenges to meet export expectations. Fifty percent of Peru's overall production achieves export size, color, and flavor profile (acidity and sweetness) demanded by international markets. Due to La Nina's cool weather, flowering is up 30 percent, increasing productivity, but smaller fruit sizes are expected. Also, water availability might be a challenge. Currently, most of Peru's reservoirs in the center and south have less than 50 percent of water reserves due to drought. The rainfall deficit will likely remain until the end of December according to the National Service of Meteorology and Hydrology of Peru (SENAMHI).

MY 2022/23 production expects to have good fruit color and a delayed harvest by about two to three weeks, impacting fruit quality parameters. Fruit might not reach the appropriate acidity-sugar profile, which will likely negatively impact productivity.

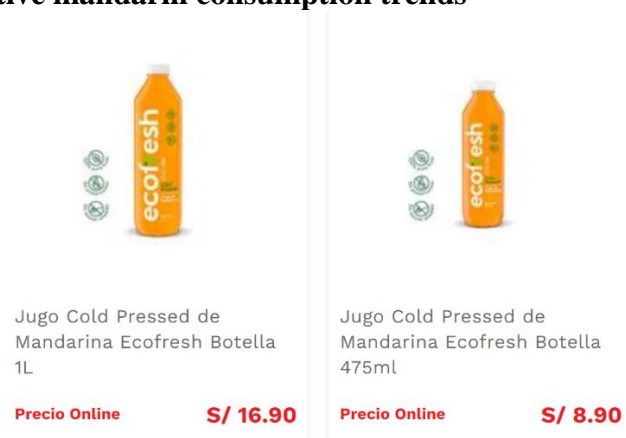
Mandarins/tangerines are hand harvested to avoid mechanical stress and contamination. The fruit is then transferred to packing plants for size selection, color sorting, and refrigeration.

Consumption

FAS Lima forecasts domestic consumption of fresh mandarins/tangerines in MY 2022/23 to stay at 320,000 MT. Consumption is unchanged due to less fruit available for export.

Mandarins are popular in Peru for lunchboxes and between-meal treats. Peruvian mandarin/tangerine per capita consumption is reported at 11 Kg by the industry. Mandarin juices and jams have exploded in supermarkets and convenience stores as an innovative way to increase consumption.

Figure 1. Example of innovative mandarin consumption trends



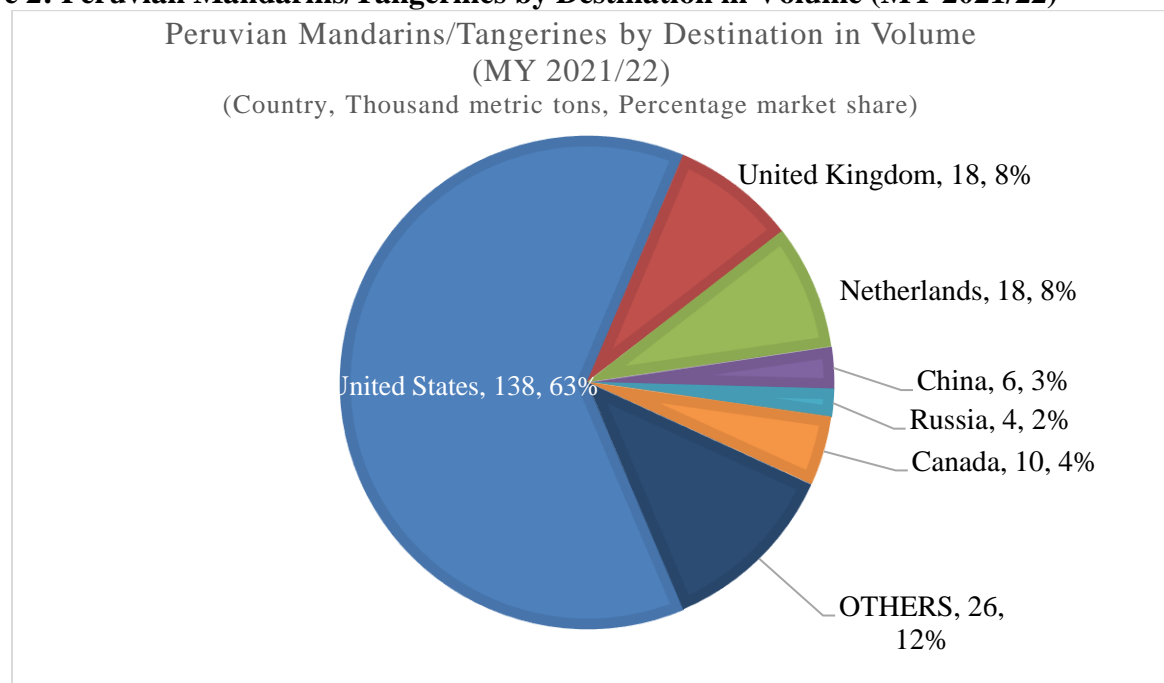
Source: <https://www.wong.pe/eco-fresh?page=2>

Trade

FAS Lima expects Peruvian mandarin/tangerine exports to decrease by 10 percent in MY 2022/23, reaching 200,000 MT. In MY 2021/22, Peru exported fresh mandarins/tangerines primarily to the United States (63%), United Kingdom (8%), and Netherlands (8%).

Total fresh exports in MY 2021/22 were up two percent from the previous year, increasing from 215,000 MT to 219,000 MT. In MY 2015/16, Peru exported 112,000 MT, and has shown consistent growth, nearly doubling their export market since.

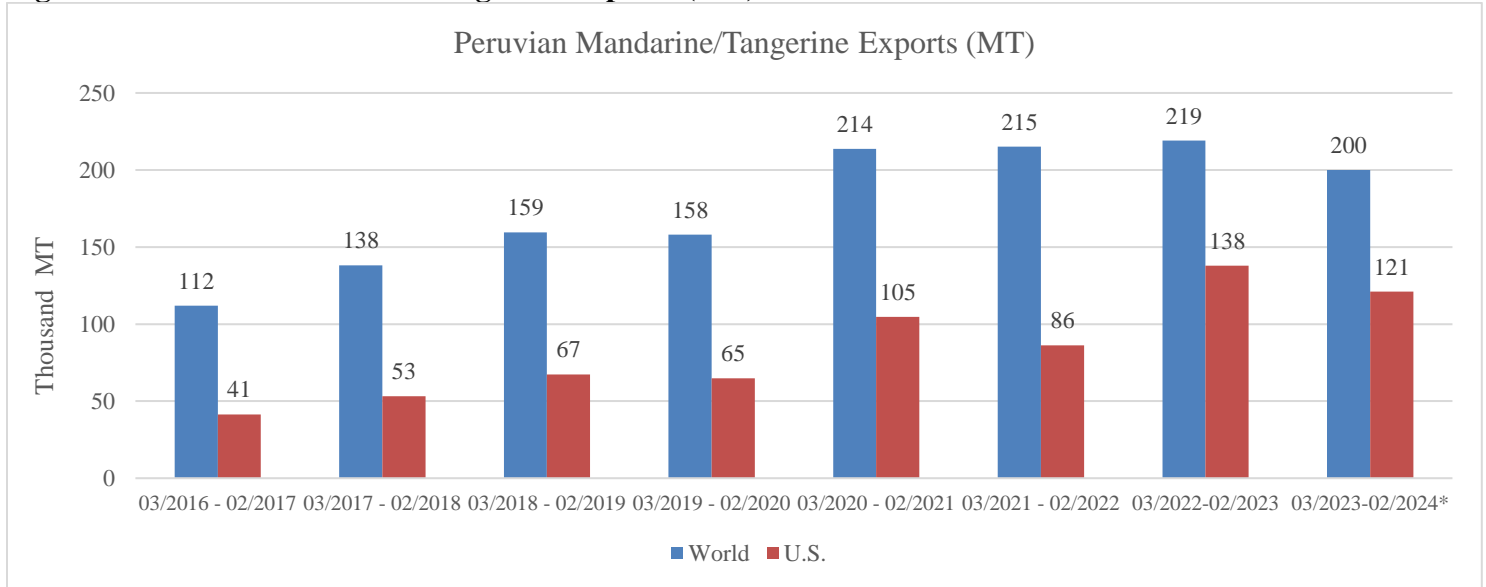
Figure 2: Peruvian Mandarins/Tangerines by Destination in Volume (MY 2021/22)



Data Source: Trade Data Monitor

Exports to the United States have grown considerably in the last six years. Over the last three seasons, exports experienced a considerable increase due to COVID’s positive effect on citrus demand. However, MY 2023/24 demand is expected to drop and stabilize.

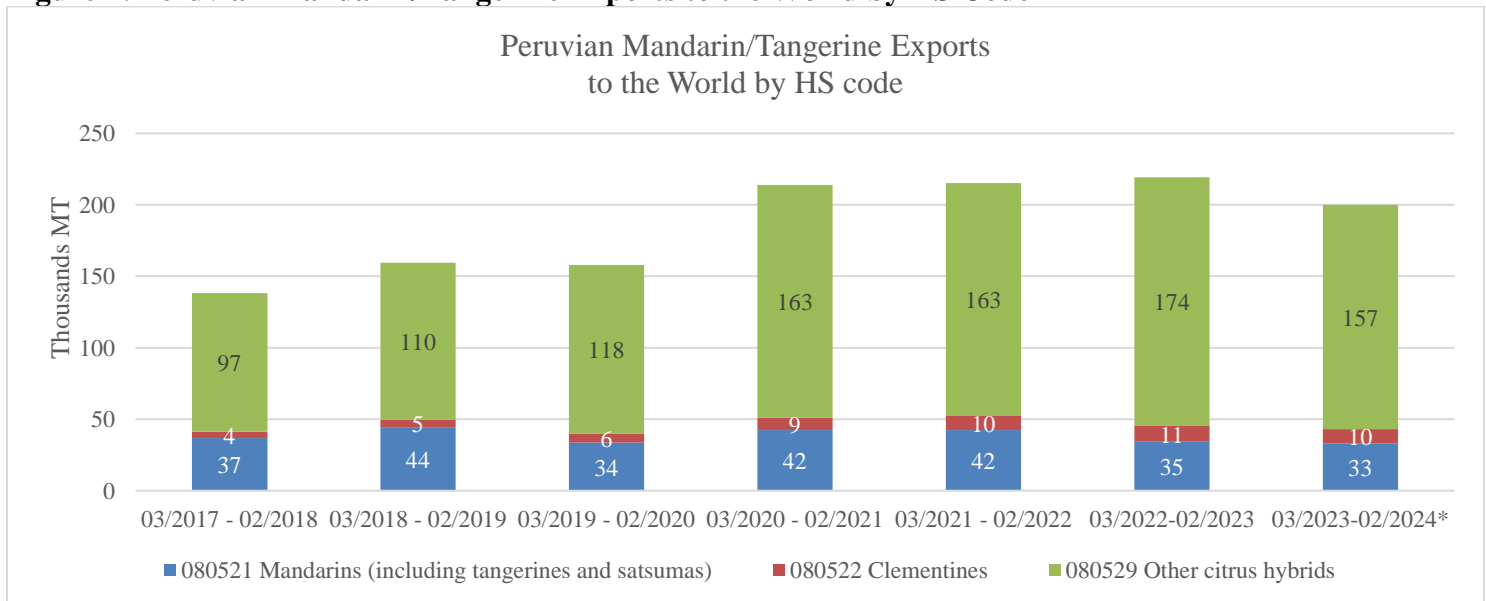
Figure 3: Peruvian Mandarin/Tangerine Exports (MT)



Data Source: Trade Data Monitor

Total citrus exports to the world are forecast to decrease in MY 2022/23 due to lower quality fruit and higher production costs. Hybrids typically represent 78 percent of total exports by volume. Clementine exports will likely remain steady, while mandarins are expected to decline.

Figure 4: Peruvian Mandarin/Tangerine Exports to the World by HS Code



Data Source: Trade Data Monitor

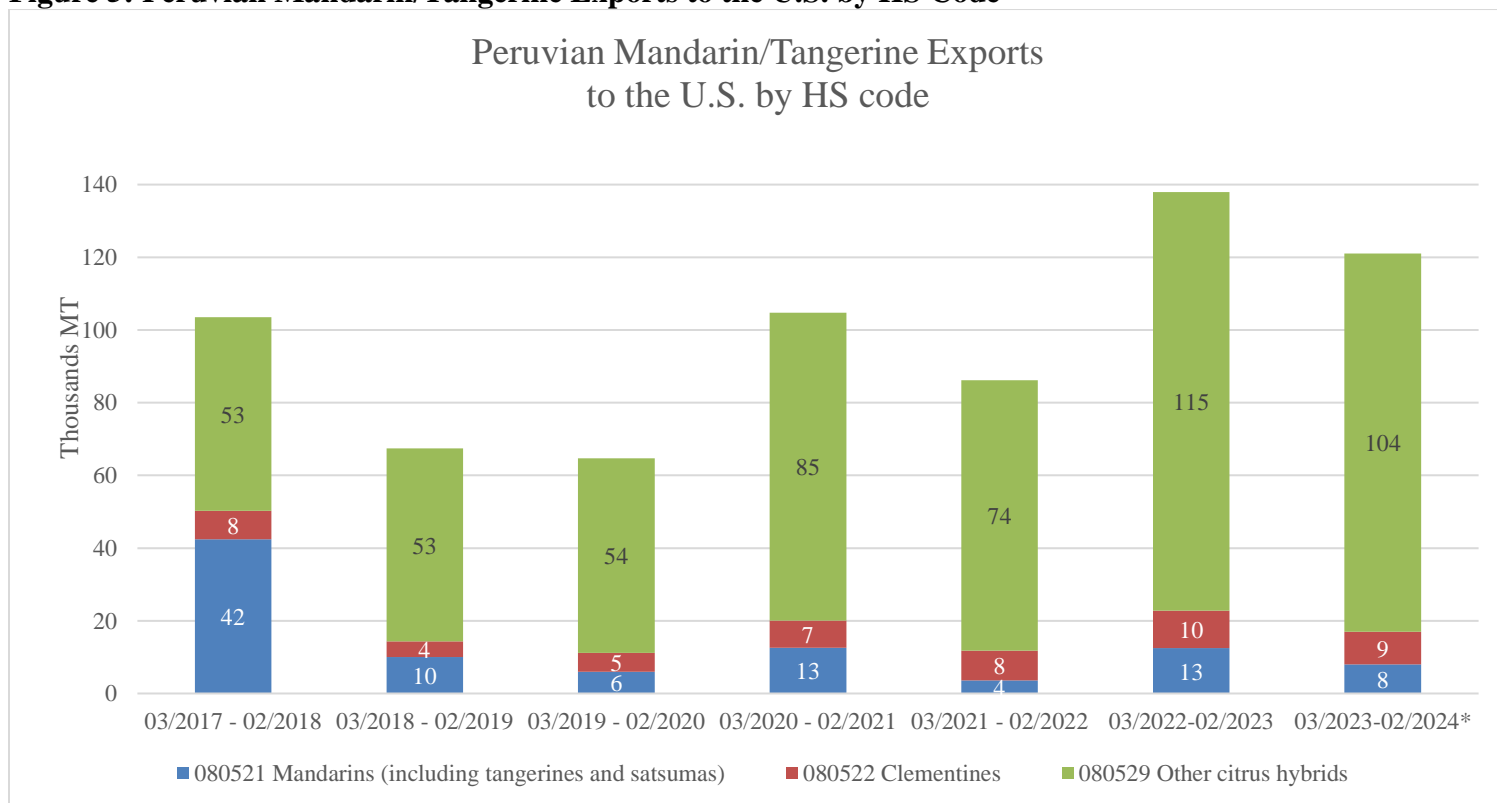
In MY 2021/22, the average price paid for “Other Citrus” hybrids by the United States was \$1,166/MT while the United Kingdom paid \$997/MT and the Netherlands \$1,122/MT. Average export prices in MY 2021/22 reached \$1,144/MT, compared to \$1,115/MT in MY 2020/21 and \$1,227/MT in MY 2019/20.

Fresh fruit exports, in general, will be impacted by increased transport costs, container shortages and the contracting global economy.

Marketing

Fresh mandarins/tangerines are usually packed in cardboard boxes weighing 10 Kg or 15 Kg. FAS Lima expects Peruvian mandarin/tangerine exports to the United States to decrease in MY 2022/23, reaching 121,000 MT. Mandarin/tangerine consumption in the United States, Peru’s main export market, sharply increased last season from 86,000 MT in MY 2020/21 to 138,000 MT in MY 2021/22.

Figure 5: Peruvian Mandarin/Tangerine Exports to the U.S. by HS Code



Data Source: Trade Data Monitor

Policy

Peruvian mandarin/tangerine exports have benefited from the United States - Peru Free Trade Agreement (PTPA) which entered into force on February 1, 2009. Peruvian mandarins/tangerines enter the United States tariff-free.

Peru’s Sanitary Agency (SENASA) plays a leading role in the monitoring and control of fresh fruits for export. Every harvest campaign, SENASA updates a list of registered orchards and processing plants. For MY 2022/23, there are 31 mandarin/tangerine orchards registered, according to official data.

Production orchards: <https://servicios.senasa.gob.pe/siimf/produccionMandarina.html>

Packing & Treatment plants: <https://servicios.senasa.gob.pe/siimf/empacadoraMandarina.html>

Mandarin/tangerine standards are governed by a 2014 regulation (NTP 011.023) that promotes quality requirements and uniform criteria for the citrus industry. Appearance and color criteria are required for all citrus products. Juice content is 33 percent for mandarins and 45 percent for tangerines. Minimum diameter size for mandarins is 45 mm and 54 mm for tangerines. Minimum maturity requirements are listed in the following table:

Table 2. Minimum Maturity Requirements for Peruvian Citrus

Crop	Variety	° Brix (minimum)	Acidity				Minimum Ripeness Index
			Min	Max	Min	Max	
			LM	Export	LM	Export	
Mandarins & Hibrids	Satsuma	7.50	0.50	0.75	1.50	1.50	6.50
	Clementine	9.00	0.50	0.75	1.50	1.50	7.50
	Malvasio	9.00	0.50	0.75	1.50	1.50	8.00
	Dancy	8.00	0.50	0.75	1.50	1.50	7.00
	Nova	8.00	0.50	0.75	1.50	1.50	8.00
	Fortuna	10.00	0.50	0.75	1.50	2.00	6.00
	Murcott	10.00	0.50	0.75	1.50	1.50	8.50
	Others (Pixie, W Murcott, Kara, Ortanique)	8.00	0.50	0.75	1.50	1.80	7.00
Tangerines	Minneola, Orlando and others	8.00	0.50	0.75	1.50	1.80	6.00

Source: 2014 Peruvian Technical Standards NTP 011.023 (See attachment)

LM = Local Market

Attachments: [NTP 011_023.pdf](#)