

## Is Robusta on the Rise? Trends in Coffee Species Trade

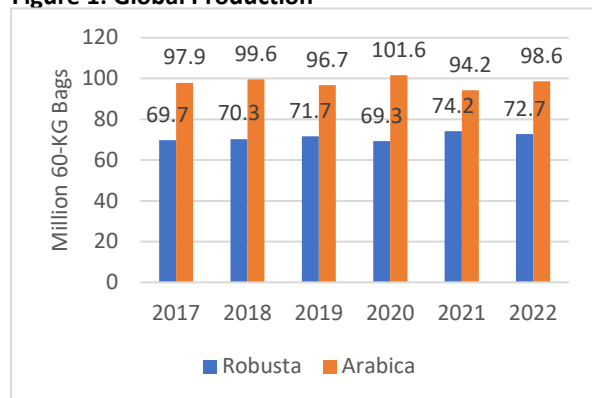
[Amelia Shister Graytock](#), Office of Industry and Competitiveness Analysis

*There are two main types of coffee produced and traded globally: Arabica and Robusta. For decades Arabica has been perceived as higher quality and better tasting and has thus dominated global production, trade, and consumption, particularly in the United States and Europe. However, Arabica is more difficult to grow than Robusta and is more susceptible to climate change, diseases, and pests. As result, coffee producers have begun developing higher quality Robusta that is both easier and cheaper to produce than Arabica. This EBOT summarizes global trade in coffee and further explores developments in Robusta production and trade.*

**Robusta vs. Arabica:** Coffee is the common term for the *coffea* botanical genus comprising over 120 individual species. It grows in tropical forests in what is known as the “coffee belt” – located between 25 degrees North and 30 degrees South of the equator – and grows best in rich soil with mild temperatures, consistent and frequent rain, and shade. Commercially grown coffee is typically either Arabica (*Coffea arabica*) or Robusta (*Coffea canephora*). Globally, approximately 60 to 70 percent of coffee produced is Arabica and the remainder is Robusta. Arabica is generally priced higher than Robusta, due to perceptions of higher quality and taste preferred by consumers. However, Arabica is more difficult to grow, requiring higher altitudes (610 to 1830 meters above sea level), milder temperatures, and more rain. Arabica trees are also more disease-prone than Robusta and require more care and attention. Robusta is a heartier species with a higher caffeine content than Arabica and is better able to handle higher temperatures, lower altitudes, and drought. Robusta also tends to be more resistant to diseases and pests like coffee rust leaf and borer beetles. Robusta is primarily used for the production of soluble (instant) coffee and for blends.

**Production:** According to the International Coffee Organization (ICO), from 2017 to 2022, total coffee production increased 2.2 percent to 171.3 million 60-kg bags. While production of Arabica remained mostly steady, production of Robusta increased 4.3 percent, figure 1. The U.S. Department of Agriculture projects global production of all coffee to increase to 174.3 million 60-kg bags in 2023.

**Figure 1: Global Production**



Source: ICO, [Coffee Market Report](#), October 2023

Most of the world’s Robusta production takes place in Southeast Asia, Central and Western Africa, and South America. Top producers of Robusta include Vietnam, Brazil, Indonesia, Uganda, and India, which together account for over 90 percent of global Robusta production. Increasingly, due largely to climate change and other difficulties associated with Arabica production, countries that previously only produced Arabica, including Mexico, Nicaragua, Guatemala, and Colombia, are exploring Robusta production. Increasing temperatures and reduced rainfall have made Arabica cultivation more difficult in traditional coffee producing countries. Furthermore, there is growing interest in improving the quality of Robusta and developing specialty Robusta.

**Consumption and Trade:** Global consumption of coffee has consistently grown from 2017 to 2022. Most coffee (69.0 percent in 2022) is consumed by countries that do not produce coffee. In 2022, the largest coffee consumer was Europe, followed by Asia and Oceania, and North America, accounting for 31.0, 24.7, and 18.0 percent of 2022 consumption respectively. However, ICO data indicate that the largest increases in consumption are occurring in coffee-producing countries in Africa and Asia. While consumption data by species is not available, reports indicate consumption in coffee-producing countries is primarily lower-graded Arabica and Robusta while specialty (graded above 80 out of 100) coffee is consumed in importing countries in North America and Europe. Increases in consumption have outstripped increases in production, resulting in reductions in global stocks of both Arabica and Robusta.

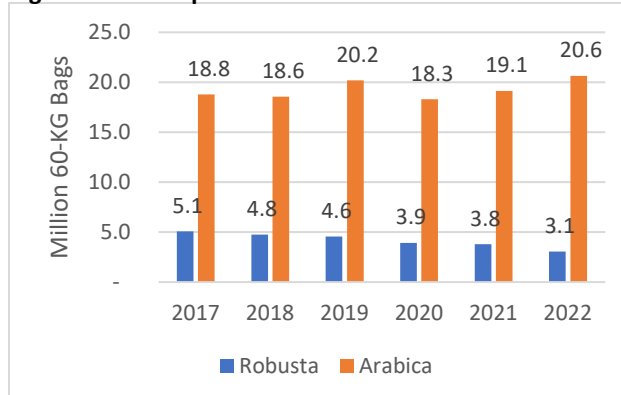
*The views expressed solely represent the opinions and professional research of the author. The content of the EBOT is not meant to represent the views of the U.S. International Trade Commission, any of its individual Commissioners, or the United States government.*

The ICO found from 2017-22, global exports of Robusta increased, as did Robusta's share of the market. Data on global imports of coffee by species are not available. However, the two largest importers of coffee, the EU and the United States, are forecast to increase imports of all coffee, including Robusta, in 2023.

The U.S. Harmonized Tariff Schedule (HTS) includes coffee subheadings for Arabica and "Other." Reportedly, virtually all coffee classified as "Other" is Robusta.<sup>1</sup> By volume, from 2017 to 2022, U.S. imports of all coffee decreased by 0.7 percent. This decline was due to the 39.5 percent decrease in imports of "Other" coffee (Robusta). Conversely, U.S. imports of Arabica increased by 9.8 percent, figure 2.

**New developments in Robusta production:** Generally, U.S. consumers prefer Arabica due to perceptions of higher quality and better taste. This preference is reflected in declining U.S. imports of Robusta, despite increased global production. However, citing difficulties growing Arabica and increased costs of production related to climate change, many producers, particularly in Asia, are investing in developing higher quality Robusta that is still easier to grow. In Indonesia and neighboring Pacific Island economies, hybrids of Robusta and Arabica such as the Timor Hybrid are naturally resistant to leaf rust (a fungal disease that can devastate coffee production) and are being introduced into breeding programs throughout the region for a number of coffee varieties. Indonesia is also developing grading of Robusta to spread awareness of "fine" or specialty Robusta. Growers in India are switching to Robusta because the humidity is better suited to producing fine Robusta instead of lower quality Arabica. U.S. and European specialty roasters are also beginning to move into Robusta. While many of these roasters operate on a micro scale (less than 200,000 kg annually), macro roasters, such as Blue Bottle Coffee, Peet's Coffee, Starbucks, and the U.K.-based Black Sheep Coffee, are either considering serving Robusta or have already begun offering 100 percent Robusta options. While opportunities for fine Robusta are developing, especially with consumers looking for higher caffeine content, lack of awareness and difficulty with quality control are currently limiting potential for growth. However, as prices of Arabica continue to increase and awareness of fine Robusta grows, global demand for Robusta will likely continue to rise, including in high-income markets in Europe and the United States.

Figure 2: U.S. Imports



Source: USITC [DataWeb](#), HTS 0901.11.0015, 0901.11.0025, 0901.11.0045, 0901.11.0055, Accessed October 2, 2023.

Sources: USITC [DataWeb](#); Coffee Talk, "[The Rise of the Robusta Coffee Bean](#)," August 8, 2022; Duris et al., [Coffee](#), July 2007; Elmalek, "[Why You Should Drink Robusta Coffee Beans](#)," accessed November 17, 2023; Emont, "[The Underdog Coffee Bean That Java Snobs Hate](#)," February 8, 2023; FAO, "[Coffee](#)," October 18, 2022; FAO, [Food Outlook](#), June 15, 2023; IACO, "[Varieties of Coffee](#)," accessed September 25, 2023; ICO, [Coffee Development Report](#), accessed May 3, 2023; ICO, [Crop year production by country](#), May 2021; ICO, [Exports of All Forms of Coffee](#), January 2022; ICO, [ICO Indicator Prices](#), January 2023; Maredia and Martínez, "[Coffee's Innovation Crisis](#)," 2023; Merga and Alemayehu, "[Effects of Climate Change](#)," 2019; Mordor Intelligence, [US Coffee Market Size](#), accessed June 13, 2023; NCA, "[Coffee Around the World](#)," accessed September 25, 2023; NCA, "[What Is Coffee?](#)," accessed September 25, 2023; Slipchenko, "[The Bitter Taste of Coffee Shortages](#)," November 10, 2021; SCA, "[Coffee Plants of the World](#)," accessed September 26, 2023; The Roasterie Coffee Company, "[Arabica vs. Robusta](#)," September 10, 2020; The Specialty Coffee Company, "[What Is Specialty Coffee](#)," accessed October 2, 2023; USDA, FAS, [Coffee](#), December 20, 2022; von der Goltz et al., [The Coffee Guide](#), October 2021; Wirawan, "[Understanding Indonesian Robusta](#)," October 12, 2022; World Coffee Research, "[History of Robusta](#)," accessed September 27, 2023.

<sup>1</sup> U.S. import data species breakouts is only on green coffee and does not include roasted or decaffeinated coffee. *The views expressed solely represent the opinions and professional research of the author. The content of the EBOT is not meant to represent the views of the U.S. International Trade Commission, any of its individual Commissioners, or the United States government.*