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U.S. Dominance in Corn Exports on the Wane Due to Brazilian Competition

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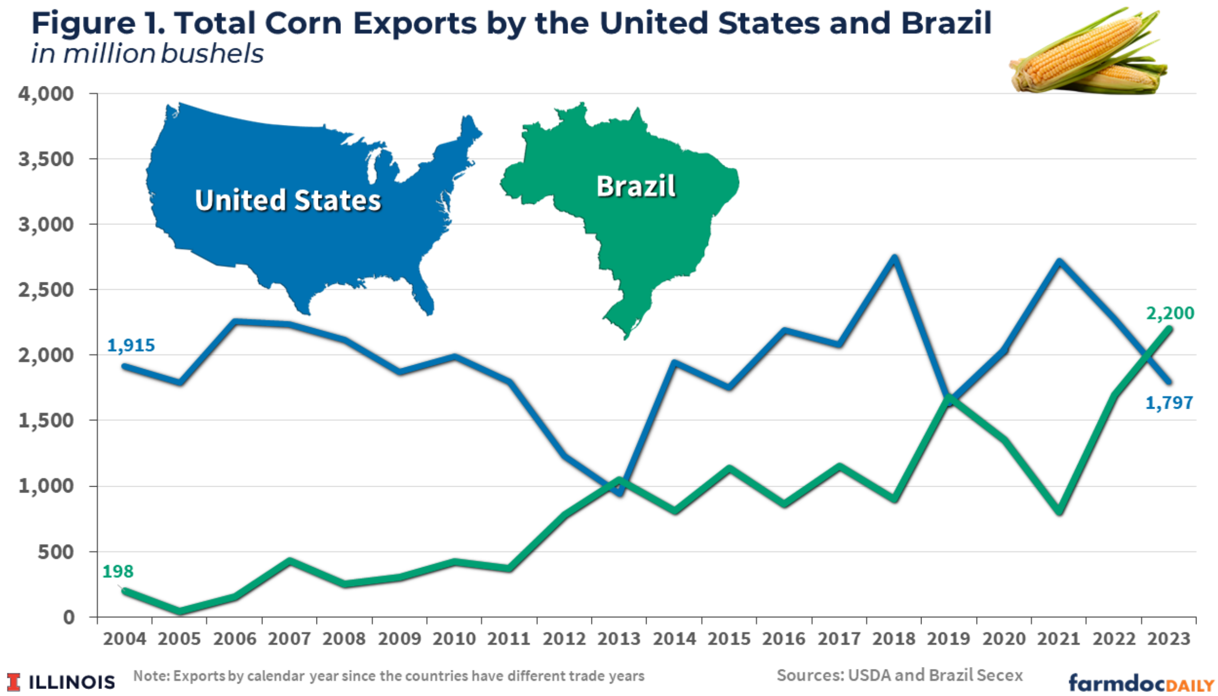
The historical supremacy of the United States in corn exports is shrinking because of heightened competition in the global market. Brazil is gaining ground, filling gaps in the global corn supply caused by the war in Ukraine, a major corn exporter, and trade tensions between the United States and China. The South American country has enhanced its capacity to compete in export markets by increasing production, improving grain transportation logistics, and boosting trade relations with major importers – most recently reaching an agreement with China on phytosanitary requirements for corn trade. The United States and Brazil account for almost 60% of world corn exports, followed by Argentina and Ukraine, which account for another 30% of international trade in corn. This article examines the last 20 years of Brazilian and American corn exports and provides perspective on acreage and supply in the current crop season in Brazil and the coming 2024 crop season in the United States.

Transition of Global Corn Leadership

The United States used to be the world's largest corn exporter. In the mid-2000s, the United States accounted for about 60% of global corn exports, and Brazil averaged about 6%. In calendar year 2023 (January-December), Brazil reached almost 30% of the global market and surpassed the United States in corn shipments, reaching 2,200 million bushels, according to the Brazil Foreign Trade Secretariat (Secex). In the same period, the U.S. exported 1,797 million bushels, according to the U.S. Department of Agriculture (USDA). Two short-term factors explain why Brazil surpassed the United States in 2023: a new corn-trade agreement between Brazil and China and Brazil's bumper second corn crop, making Brazil's supplies highly competitive globally. Brazilian corn exports have exceeded or matched those of the U.S. just two other times – in 2013 following the drought year of 2012, and in 2019 during the US-China trade war (see Figure 1).



In the last two decades, Brazilian corn exports have increased elevenfold, from 198 million bushels in 2004 to 2,200 million bushels in 2023 (see Figure 1). In contrast, U.S. corn exports have not exhibited significant growth, averaging 1,967 million bushels since 2004. The Brazilian increase occurred mainly in the last 10 years, coinciding with Brazil's significant increase in second-crop corn (called safrinha), planted in January-February and harvested in June-August each year. Currently, the second crop corn accounts for about 75% of total corn production in Brazil. The growth in the safrinha in the Center-West and Northeast states is an opportunity for Brazil to double its corn production in the coming years (see *farmdoc daily*, April 12, 2021).

Especially in the last ten years, investments in Brazil have significantly improved logistics associated with agricultural commodities. Corn exports through Brazil's northern ports, utilizing the Amazon River basin's waterways, have increased in share compared to the volumes shipped through the historically important port of Santos in São Paulo state, in the Southeast. This transition underscores Brazil's progress in addressing infrastructure challenges that have hindered the efficient distribution of its growing harvests to international markets.

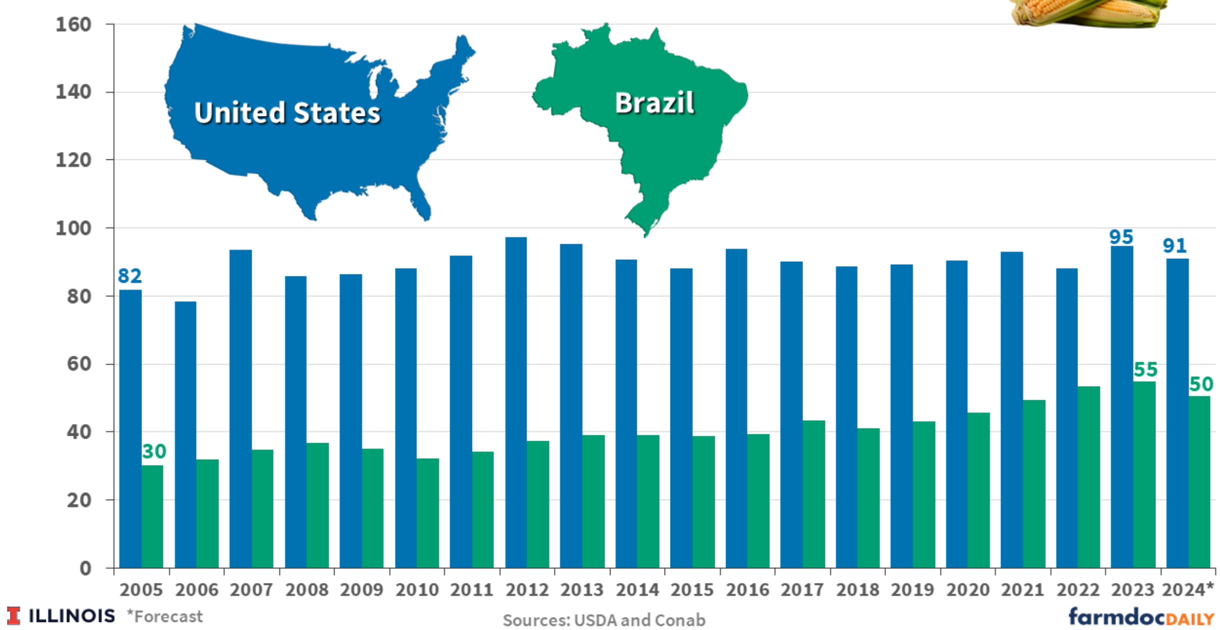
Since November 2022, a new agreement has enabled corn trade between Brazil and China. The two countries had already signed a protocol of phytosanitary requirements for corn exports in 2014 that, in theory, would open Brazilian corns to China. But little trade happened due to complex inspection requirements, quarantines, certificates and permits. In 2022, China relaxed most of the requirements. As a result, China has become the main destination for Brazilian corn. In 2023, China imported 635 million bushels of corn from Brazil, equivalent to one-third of the total exported by the country. Brazil's corn accounted for nearly 85% of Chinese imports between September and December 2023, according to Chinese customs data.

Increased shipments of Brazilian corn to China have reduced supplies available to other buyers. In turn, it has presented new opportunities for U.S. exporters to supply markets previously served by Brazil and enabled the U.S. to further support record demand in Mexico, which has been a top buyer of U.S. corn for many years. Consumer demand for livestock products continues to support feed demand in Mexico (USDA, 2024), although an ongoing dispute over Mexico's decision to ban some biotech corn imports risks future disruption to U.S. shipments.

Lower Corn Prices Limits Planted Area

Global corn stockpiles are set to reach five-year highs in 2024, their largest annual expansion in seven years. The *World Agricultural Supply and Demand Estimates* (WASDE) report, released March 8th by the USDA, estimated U.S. corn ending stocks at 2,172 million bushels. The 2023/24 season-average corn price received by producers is estimated at $4.75 per bushel. Corn stocks above historical averages in Brazil have also driven prices down in the domestic market – about 30% lower than during the same period last year. Lower futures prices have discouraged Brazilian and American farmers from expanding corn plantings in 2024 (see Figure 2).

Figure 2. Total Corn Planted Area in the United States and Brazil
in million acres



The National Supply Company (Conab) report, released on March 12th, forecasts Brazil's 2024 total corn acreage at 50 million acres, down 9% from the last crop season (see Figure 2). Concern with weather issues as a result of El Niño, high production costs, and unattractive futures prices have contributed to the acreage reduction. The total production in Brazil, across three crop plantings, is projected at 4,439 million bushels – down 14% from the prior year's record. As of March 10th, 86% of the second crop of corn has been planted in Brazil, ahead of the nation's long-term averages. The country's safrinha corn relies on good soil moisture built up during the wet season to sustain the crop until the end of its life cycle, in June and July. The faster the corn can get through its reproductive stages, the higher the chance for good yields.

U.S. producers also are expected to reduce corn plantings in 2024. In its February Agricultural Outlook Forum projections, USDA forecast U.S. farmers will plant 91 million acres of corn, down 4% from 94.6 million acres in 2023. It is important to note that the acreage in the United States is still open. There are expectations that U.S. farmers will plant significantly fewer corn acres in the coming crop season. The corn crop is projected at 15,040 million bushels, down 2% from the prior year's record. That production, more than three times that of Brazil, includes a yield projection of 181 bushels per acre, which is based on a weather-adjusted trend yield assuming normal planting progress and growing season weather. With beginning stocks up sharply from the prior year, total corn supplies for the 2024/25 marketing year are forecast at a record 17,237 million bushels.

Over the last two decades, Brazilian corn acreage has increased by 67%, from 30 million acres in 2005 to a projected 50 million acres for 2024 (see Figure 2). Meanwhile, the corn planted area in the U.S. has fluctuated between 80 and 95 million acres. The growth in Brazilian corn acreage is mainly explained by the land use change in the 21st century (see *farmdoc daily*, March 6, 2024) and the possibility of harvesting three crops in the same year. Continued increased production of safrinha corn, a result primarily of the conversion of degraded pastureland into cropland, should continue to increase the planted area in Brazil in coming years, depending on market conditions.

While lower global corn prices are limiting expansion in 2024 crop plantings, Brazil's marketing year (March-February) exports remain forecast at 2,047 million bushels, posing continued competition for U.S. corn trade in 2024/25. U.S. corn exports are forecast at 2,098 million tons for the marketing year 2023/24 (September-August) and 2,126 million bushels for the trade year 2023/24 (October-September), according to the U.S. Department of Agriculture (USDA) forecasts.

Final Considerations

Global corn trade is undergoing a significant shift, with Brazil challenging the historical supremacy of the United States. The declining U.S. share of global corn exports can be partly compared to the struggles faced by U.S. soybean exporters ten years ago. At that time, Brazil intensified production to meet surging Chinese demand and surpassed the United States in soybean shipments for the first time, keeping the number-one position until today (see *farmdoc daily*, February 20, 2024).

This change is driven primarily by Brazil's increased competitiveness, as U.S. export quantities have remained relatively flat. Brazil has increased production, improved export capacity through northern ports, and made a phytosanitary agreement with China to unlock a major export market. In 2023, China became the main destination for Brazilian corn. All of these changes have made Brazilian corn increasingly cost competitive relative to the U.S. to many export destinations.

More export market competition appears likely in a situation where both Brazil and the US have ample supply. In 2024, global corn stockpiles are poised to reach their highest levels in five years. Corn stocks above historical averages in the United States and Brazil have driven down prices, discouraging Brazilian and American farmers from expanding corn plantings for the year. Despite the limitations of lower global corn prices, Brazil's exports should remain robust, keeping up the high competition with U.S. corn trade. This strong competition is unlikely to be temporary, considering all the factors affecting the situation.

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