

Foreign Agricultural Service Global Market Analysis International Production Assessment Division Web: <u>https://ipad.fas.usda.gov</u>

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# Commodity Intelligence Report

## **Mexico Corn Near-Average Production Expected**

For the current marketing year (MY) 2023/24, Mexico's corn production is forecasted to be at 27.4 million metric tons (mmt), down slightly from last year, based on an area of 7.25 million hectares (mha) and a yield of 3.78 mt/ha. The summer corn crop for MY 2023/24 is now being planted.

For MY 2022/23, Mexico produced an estimated 27.6 mmt, about 3 percent higher than MY 2021/22. Harvested area is estimated at 7.2 mha, about 2 percent higher than the previous year. Yield is estimated at 3.83 mt/ha, about 2 percent higher than the previous year (see Figure 1). The winter corn crop for MY 2022/23 is now being harvested.

Mexico has two corn planting seasons, summer (about 70 percent of production) and winter (about 30 percent of production) (see Figure 2). The summer corn crop is usually planted from April to August and harvested from October to January. The winter corn crop is usually planted from November to January and harvested from April to July.

The top producing states of summer corn in Mexico include Jalisco, Michoacán, México, Guanajuato, and Chihuahua (see Figure 3). The top producing states of winter corn in Mexico include Sinaloa, Tamaulipas, Sonora, and Veracruz (see Figure 4).

The Mexican government, Servicio de Información Agroalimentaria y Pesquera (SIAP), provides monthly reports at the state level and municipality levels for planted area, damaged area, harvested area, yields, and production.

For example, as of March 2023, SIAP reported that summer corn has finished harvesting for MY 2022/23, with about 5,680,000 ha harvested out of 5,776,458 ha planted, lower than the previous year due to high input costs (see Figure 5). This represents a summer corn production of 19,192,856 mt (lower than previous year) with yields of 3.38 mt/ha, higher than previous year due to favorable weather conditions. Summer corn production in Jalisco and Michoacán for MY 2022/23 was reported as higher than the previous year. Damaged summer corn areas of 93,612 ha were reported throughout the country in states such as San Luis Potosi, Tamaulipas, Querétaro, Nuevo León, and Hidalgo (see Figure 6).

Mexico's summer corn crop was about 90 percent rainfed for the MY 2022/23 season. Cumulative rainfall in the 2022 rainy season from April to October throughout Mexico was mostly average to support the summer corn crop, with above-average rainfall levels during the months of August and September (see Figure 7). Throughout the season, the satellite-derived Normalized Difference Vegetation Index (NDVI) for the summer corn crop was also showing average vegetation conditions.

In contrast, the winter corn crop is currently being reported at about 60 percent irrigated for the MY 2022/23 season (see Figure 8). At the start of winter corn planting in November 2022, irrigation levels were averaging at least around 60 percent capacity in major winter corn states such as Sinaloa, Sonora, Veracruz, Oaxaca, and Chiapas. In Sinaloa in particular, cumulative rainfall from April to October 2022 was higher than normal to support irrigation for the winter corn season. However, irrigation levels in the Tamaulipas dams were averaging 45 percent capacity, lower than the previous year (see Figure 9).

For the winter corn, as of March 2023, SIAP is reporting 1,213,402 ha of planted area for MY 2022/23, higher than the MY 2021/22 season. SIAP has reported that Sinaloa, representing about 70 percent of the winter corn crop, has winter corn planted area for the MY 2022/23 season higher than the previous 5 years (see Figure 10). Sonora is also reporting winter corn planted area higher than MY 2021/22 (see Figure 11).

Cold outbreaks in January and February can have a large impact on winter corn yields. For example, in February 2011, winter corn in Sinaloa was severely damaged by a cold snap as can be seen by the sharp decrease in winter corn yields (see Figure 12). For the MY 2022/23 winter corn season, minimum damage has been reported so far on Sinaloa winter corn from frost and cold temperature conditions that occurred during January 2023, according to local contacts. The NDVI is showing decent vegetation conditions for winter corn crop growing in Sinaloa. In general, winter corn yields in Sinaloa in the most recent years have been trending higher than in the past (see Figure 12). There were also reports of hailstorms occurring in mid-April 2023 impacting about 4,300 ha of winter corn planted in northern Tamaulipas.

Mexico's corn production has been relatively stable for the last 5 years (see Figure 13). The harvest of the summer corn has finished. Overall, as of March 2023, SIAP is reporting Mexico corn total harvested area so far for MY 2022/23 at 5,757,905 ha with production at 19,398,922 mt and yields of 3.36 mt/ha. The harvest of the winter corn crop started in April. The final total corn production for MY 2022/23 is expected to be at 27.6 mmt.



Figure 1. Chart of Mexico Corn Harvested Area, Yield, and Production from MY 2013/14 to MY 2023/24. Source: USDA PSD Online.



Figure 2. Mexico Corn Crop Calendar.



### **Mexico: Summer Corn Production**

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Figure 3. Map of 3-Year Average Summer Mexico Corn Production for 2018-2020. Sources: SIAP, INEGI.



## **Mexico: Winter Corn Production**

Figure 4. Map of 3-Year Average Winter Mexico Corn Production for 2018-2020. Sources: SIAP, INEGI.



Figure 5. Harvested Area for Summer Corn in Mexico for 2017-2022 as of March 2023. Source: SIAP.



Figure 6. Damaged Mexico Summer 2022 Corn Area By State as of March 2023. Source: SIAP.





Figure 7. Mexico Summer Corn Cumualitve Rainfall from April to October for 2021, 2022, and Normal (top). Monthly Rainfall from April to October for 2021, 2022, and Average (bottom). Sources: CHIRPS Dekadal Cumulative Precipation and CHIRPS Monthly Precipitation.



**Mexico Irrigated Winter Corn** 

USDA Foreign Agricultural Service

Sources: INEGI; Global Reservoir and Dam Database (GRanD); Servicio de Información Agroalimentaria y Pesquera (SIAP), Mexico

Figure 8. Map of Winter Mexico Corn Planted Area as of March 2023 for MY 2022/2023 by Muncipality and Dam Locations. Sources: SIAP, INEGI, and GRanD.



Figure 9. Average Irrigation Levels in Major Winter Corn States at Start of Planting in November 2021 vs. November 2022. Source: CONAGUA.

Sinaloa, Mexico: Winter Corn Area Planted



Figure 10. Planted Area for Winter Corn in Sinaloa, Mexico for 2018-2023. Source: SIAP.



Figure 11. Planted Area for Winter Corn in Sonora, Mexico for 2018-2023. Source: SIAP.



Figure 12. Winter Corn Yields in Sinaloa, Mexico for 2004-2022. Source: SIAP.



Figure 13. Total Corn Production in Mexico for 2017-2022 as of March 2023. Source: SIAP.

#### Author contact information:

Ifeoma Collins ifeoma.collins@usda.gov

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