Mexico: Unfavorable Weather Decreased 2019/20 Cotton Planted Area and Production

Mexico is the ninth largest cotton producing country globally for 2019. USDA estimates Mexico’s market year (MY) 2019/20 cotton production at 1,570,000 bales, down 10 percent from last year’s record production. Area has decreased 7 percent from last year’s record area and is estimated at 225,000 hectares. The yield forecast is down 2 percent from last year at 1,519 kilograms per hectare (See Figure 1). Cotton production in Mexico is mostly found in northern parts of the country. Chihuahua produces over half of Mexico’s cotton. In northwest Mexico, portions of Baja California, Sonora, Sinaloa, and Durango are major cotton growing areas. Coahuila and Tamaulipas are the main cotton growing areas in northeastern Mexico (See Figure 2).

Crop Calendar
Mexico has two cotton growing seasons. In Chihuahua, Baja California, Sonora, Sinaloa, and Durango, the main spring-summer cotton season is planted from April through June and harvested from August through February. The second cotton growing season occurs during the fall-winter in Tamaulipas, with planting in November through February and harvesting in June through August.

Water Availability Impacts Northern Mexico Cotton Growing Areas
Approximately 78 percent of cotton in Tamaulipas is rainfed during the main spring-summer season, while the rest of cotton in Mexico is irrigated. There are numerous dams, aquifers, and reservoirs in Chihuahua, Sonora, Baja California, Sinaloa, Coahuila, and Durango to provide irrigation to cotton and other crops, however, the drought conditions in 2019 have limited water supply (See Figure 3). Cotton in Chihuahua was negatively impacted by the drought during the growing season. The satellite-derived Normalized Difference Vegetation Index (NDVI) shows reduced vegetation for the August through November 2019 season in Chihuahua (See Figure 4).

Seed and Weather Issues Led to Area and Production Decrease
Declines in planted area and production in Chihuahua from a seed shortage have largely contributed to the overall decrease in Mexico cotton planted area and production for MY19/20. Furthermore, delayed approval of cotton biotechnology varieties has also limited seed supply, though cotton is Mexico’s only approved genetically modified crop. In addition to the problems at planting, snowfall and higher than normal rainfall occurring in Chihuahua during the harvest season damaged crops in the ground (See Figure 5).

In the other cotton growing states, planted area decreases were caused by limited grower income from MY 18/19 due to unseasonal precipitation that reduced crop quality. In addition, at the beginning of the growing season, some Mexicali Valley cotton farmers in Baja California struggled with germination issues and had to reseed their crops. Currently, the main spring-summer crop is finishing harvesting, while the minor fall-winter crop is completing planting.

Both the Mexican and US government have committed to continue investing in cotton pest management in the northern Mexican states, especially Tamaulipas. Concerns about pest management, low cotton prices, and water restrictions may dampen farmers’ enthusiasm for cotton. USDA publishes the first estimate of MY 20/21 Mexican cotton production on May 12, 2020.
Figure 1

Annual Mexico Cotton Estimates

Source: USDA PSD Online
Figure 2

Mexico: Cotton Production

Cotton Production
Metric tons (2019-2020)

- None
- 1 - 4,000
- 4,001 - 10,000
- 10,001 - 45,000
- >45,000

Percentage value indicates percent of national production.

Cotton (Spring-Summer)
Cotton (Fall-Winter)

Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec

- Planting
- Mid-Season
- Harvest

Source: Planting area intentions obtained by communication with SREBI, State Committees of Plant Health and with producers associations via FAS Mexico.
Figure 4

NDVI Difference from Normal
Oct. 08 to Oct. 15, 2019

Below normal
Above normal
-1 to -4
-4 to -3
-3 to -2
-2 to -1
-1 to -0.25
0.25 to 0.5
Normal
0.5 to 0.75
Water
No data

NDVI Seasonal Time Series
Cotton-Growing Municipalities
Min/Max (2001-2018)
Mean (2001-2018)
2016
2017
2018
2019

SOURCE: MODIS - 8-day NDVI Difference from Normal and NDVI Seasonal Time Series
For additional information contact Ifeoma Collins at ifeoma.collins@usda.gov or 202-720-0240.

Current area and production estimates for grains and other agricultural commodities are available on IPAD’s Agricultural Production page: Crop Explorer [https://ipad.fas.usda.gov/cropexplorer/] or Production, Supply and Distribution Database (PSD Online): [http://apps.fas.usda.gov/psdonline/psdHome.aspx]