



Assessment of Hurricane Mitch on Honduran Agriculture

April 26, 1999

Hurricane Mitch Damages Agriculture in Honduras

Summary

- Hurricane Mitch was the strongest October Atlantic hurricane on record and caused significant damage to agriculture.
- Over 150,000 tons of grain were lost in Honduras due to the hurricane.
- Many producers lost a portion of their stored production due to flooding and mudslides.
- Damage caused by Hurricane Mitch was generally less than initially reported.
- Satellite imagery indicates changes in the Aguan River flow and mudflows.

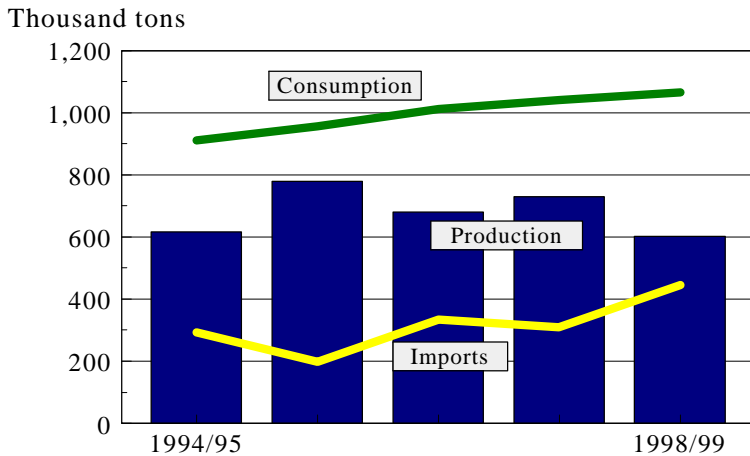
Background

After peaking in strength with 180 mile per hour sustained winds on October 26 - 27, 1998, Hurricane Mitch drifted slowly across Central America. At peak strength, Mitch tied August 1969's Hurricane Camille as the fourth-strongest storm in Atlantic Basin history and the strongest October Atlantic hurricane on record. In northern Honduras, where the hurricane made landfall, unofficial reports indicate over 30 inches of rain during the week along the coast and over 50 inches in the interior, which resulted in severe agricultural damage. In addition, Hurricane Mitch caused some crop damage in northern Guatemala, El Salvador, Nicaragua, and southeastern Mexico (Quintana Roo) and to a lesser extent in Costa Rica and Panama. The U.S. agriculture attache covering Honduras reported that a recent Honduran Government survey indicated corn and sorghum damage is not as severe as once thought, while rice and beans are worse than anticipated. In 1998, the top five export items from the United States to Honduras were: wheat (\$23.4 million); sugars, sweeteners, and beverage bases (\$20.5 million); rice (19.8 million); soybean meal (\$14.7 million); and coarse grains (11.6 million).

Hurricane Mitch Damage Assessment of the 1998/99 Crops

For the grain sector, the hurricane damage was generally less than initially reported by the Government of Honduras. However, there was significant damage. Of the first-crop corn, with 75 percent of the crop harvested, about 40 percent of the remaining corn was lost due to the

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excessive rain and high winds. The second corn crop, which was only recently planted, suffered about a 60-percent loss as planting and germinating crops were disrupted by mudslides and soils that were too saturated for planting. The Foreign Agricultural Service of USDA estimates the corn crop suffered a loss of 100,000 tons out of a pre-hurricane crop estimate of 600,000 tons. For rice, nearly all the unharvested crop

was destroyed, or about 29,000 tons out of a pre-hurricane rice output estimate of 53,000 tons. Sorghum losses are placed at about 15,000 tons, down 15 percent from the pre-Mitch crop production of 100,000. Also, the Government of Honduras reported bean losses of 11 percent that were directly attributed to the hurricane, with production estimated at 65,000 tons. Erosion, deforestation, and damage to storage and irrigation facilities are key concerns. Many producers lost a portion of their stored production due to flooding and mudslides.

For bananas, the major multinational banana companies reported that storm damage caused production losses of about 75 percent. For the next two years, export earnings will be much lower due to plant and infrastructure loss. For sugar, a recent report from the U.S. agricultural attache stated that total damage to the sugar industry is estimated at \$72 million dollars, including losses of sugarcane, equipment, farmland, and farm infrastructure. USDA is now in the process of updating world sugar production, and the new Honduran sugar production estimate will be released on May 21. Unofficially, the attache reports that centrifugal sugar production will fall 18 percent from a year earlier, to 215,000 tons.

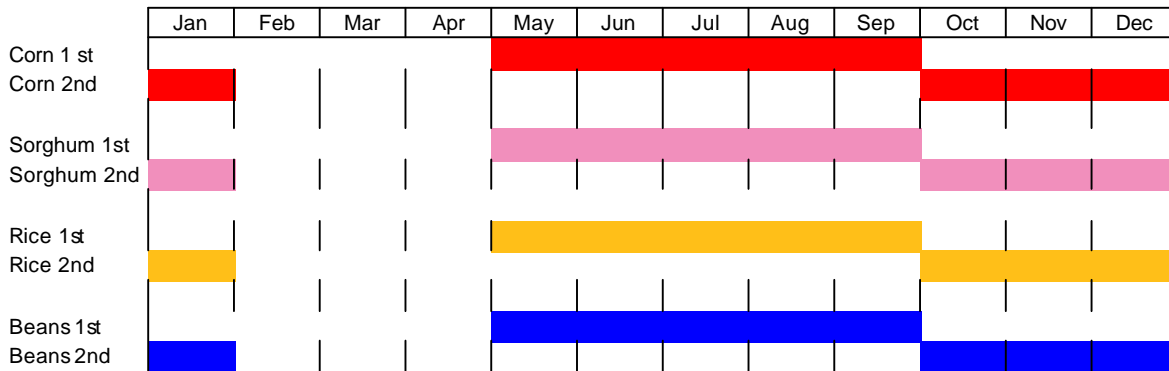
Satellite Imagery Analysis

The accompanying satellite images are Landsat scenes of Honduras and Nicaragua comparing pre-hurricane imagery to post-hurricane scenes. Image pairs 1 and 2 are portions of Landsat scenes of northern Honduras, comparing February 21, 1998, to March 12, 1999. These scenes are from areas along the Aguan River at the cities of Tocoa (pair 1a and 1b) and Olanchito (pair

2a and 2b). In general the crops along the river are in poorer condition in 1999 than 1998, especially in the areas highlighted with yellow arrows. Many changes in the river flow are also evident.

Image pair 3 is from northwest Nicaragua at the city of Chinandega. Image 3a is dated February 21, 1998, and image 3b is of February 8, 1999. The Casita Mudflow is quite visible on image 3b. Villages that were destroyed by the mud-flow during Mitch are pointed out on image 3a. Also, note the new center pivot irrigation systems. Coastal crops, based on biomass comparisons, look as vigorous in 1999 as in 1998.

Honduras Crop Calendar



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