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Environmental Concerns Accompany Surge in Demand for Mexican Avocados

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The North American Free Trade Agreement (NAFTA) gradually eliminated restrictions on imports of Mexican avocados into the US (SourceMex, Dec. 8, 2004, and Feb. 14, 2007), resulting in a surge of consumption: US households consumed a record of nearly 1.9 billion pounds (about 4.25 billion avocados) in 2015, more than double the rate of 2005 and almost four times as high as 2000, according to statistics from the US-based Hass Avocado Board.

The UN Food and Agriculture Organization (FAO) presented supporting data indicating per capita consumption of avocados in the US has tripled to more than 3 kg per year over the last 15 years. The combination of relatively low prices and increased publicity about the health benefits of the fruit as a “superfood” have boosted demand. Avocados are generally affordable for US consumers, fluctuating between a price of just under US$1.00 per piece during the peak winter months to about US$1.10 during the summer. Consumption spikes every year on the date of the Super Bowl, the championship game for American football. Because of strong promotion from avocado producers, consumption of guacamole and other avocado dishes has become synonymous with the game. According to the Hass Avocado Board, 60,000 tons of avocados were consumed during Super Bowl 2016 on Feb. 7.

The strong demand in the US and elsewhere has primarily benefited growers in the state of Michoacán, which produces about 85% of Mexico’s avocado crop. In a report released in 2012, the government-affiliated agricultural research institute (Instituto Nacional de Investigaciones Forestales y Agropecuarias, INIFAP) said avocado production in Michoacán tripled between 2001 and 2010, and exports increased by 10 times during the same period.

“Avocado farming is very attractive because of the prices being the way they are," said INIFAP researcher Luis Mario Tapia Vargas.

Production has continued to increase steadily in recent years. The 2015-2016 season was expected to produce about 1.6 million tons of avocados, a slight increase from a previous estimate of 1.4 million tons in 2013-2014, said the FAO.

Deforestation a growing concern

However, the increase in production, while providing great financial benefits for producers in Michoacán, is having significant environmental consequences, particularly in a region known as the Meseta Purépecha, which accounts for about 75% of the avocado output in the state. According to the federal agriculture ministry (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, SAGARPA), the area devoted to avocado production increased from about 31,000 hectares in 1980 to more than 106,000 ha in 2009. SAGARPA also noted that the area devoted to avocado production in 2016 is roughly 342% larger than in 1980.

The avocado orchards in the Meseta Purépecha share terrain with pine, fir, and other evergreen trees, which producers are gradually cutting to expand their groves. Sometimes producers plant
young avocado trees under the forest canopy, gradually cutting back the forest as the trees grow to give them more sunlight.

“Even where they aren't visibly cutting down forest, there are avocados growing underneath [the pine boughs], and sooner or later they'll cut down the pines completely,” Tapia Vargas said.

A study conducted by an environmental research center (Centro de Investigaciones en Geografía Ambiental, CIGA) at Universidad Nacional Autónoma de México (UNAM) found that more than 20,000 ha of forests were lost between 1976 and 2005 in the municipalities of Charapan, Cherán, Los Reyes, Nahuatzen, Nuevo San Juan Parangaricutiro, Paracho, Peribán, Tancítaro, Tingambato, Uruapan, and Ziracuaretiro, all located in the Meseta Purépecha.

According to CIGA, the pace of deforestation accelerated between 2000 and 2005, with losses calculated at about 509 ha per year.

While the conversion of the land to avocado groves is a major factor behind the loss of forests in the area, urbanization is also partly responsible, the CIGA report said.

The loss of trees due to commercial and small-scale logging has also affected other areas of Michoacán, including the Monarch Butterfly Biosphere Reserve (SourceMex, Sept. 1, 2010, and Aug. 31, 2016), which is located several hundred kilometers to the east of the avocado-growing areas.

The government has taken some steps to control the situation, with the federal environmental protection agency (Procuraduría Federal de Protección al Ambiente, PROFEPA) cracking down on unauthorized groves. In mid-August, authorities shut down four illegal avocado plantations. Two weeks earlier, on July 31, federal police in the Michoacán capital of Morelia detained 13 individuals and seized two avocado plants and two vehicles that were being used to turn a recently deforested plot into an orchard.

However, critics say enforcement has been uneven because of a lack of a clear set of rules. “The cultivation of avocados is growing uncontrollably because of the absence of effective regulation to establish specific areas that require protection and the lack of viable incentives to manage the forest,” said Greenpeace México.

There are other major environmental concerns associated with avocado production, including the large amount of water needed to irrigate orchards and the use of chemicals to control pests.

“The avocado orchards require almost twice as much water as the evergreens that grow in the area,” Greenpeace México said.

As an example, Greenpeace México pointed to the community of Tacintaro, where residents are competing with the producers for scarce water. “The volume required to supply the local population is about 7 million cubic meters annually,” said the environmental organization. “The water needed to irrigate the entire surface of avocado trees, plus the water needed for fumigation purposes, amounts to about 18 million cubic meters per year.”

“Beyond the displacement of forests and the effects on water retention, the high use of agricultural chemicals and the large amount of wood needed to pack and ship avocados are other factors that could have negative effects on the area’s environment and the well-being of its inhabitants,” Greenpeace added.
Producers insist they are doing their part to promote conservation through a reforestation scheme launched in 2010. Under the project, the industry group Asociación de Productores y Empacadores Exportadores de Aguacate de México (APEAM) claims to have restored about 425 ha of forest over the past several years. “The goal of this project is to prepare land for reforestation, promote the recharging of aquifers while improving air quality, and helping reduce greenhouse effects and strengthening the ground to prevent landslides during the rainy season,” the industry group said in its website.

While authorities are making a strong effort to protect evergreens in the area where avocados are planted, the government is also taking actions that could potentially put further pressure on the forests. SAGARPA has partnered with the APEAM to expand avocado sales globally, which could require an expansion of land devoted to production. “It is important to note that demand for the Mexican fruit has increased significantly in Japan, and that country now ranks second behind the US in consumption of Mexican avocados,” SAGARPA said in a report published in March 2015.

The report noted that promotion efforts for Mexican avocados have also been targeted to consumers in Australia, Argentina, and Lithuania.

Expelling the cartels

Environmental concerns are just one of the issues that thousands of avocado producers have had to address in recent years. In the mid- to late 2000s, when business was beginning to take off for producers in Michoacán, the criminal organization Caballeros Templarios (Knights Templar) decided to add avocados to its list of profit-making operations. The Caballeros Templarios, an offshoot of La Familia Michoacana cartel, already had control over a large area of rural Michoacán to conduct its drug-production and trafficking operations (SourceMex, Nov. 16, 2011).

The criminal organization entered the lucrative “green gold” business by implementing a complex extortion scheme. Using its connections with corrupt officials in state government, the Caballeros Templarios obtained detailed information about each avocado grower—how much land they owned, how many avocados they harvested and exported, how much money they made—and imposed a “tax” on each producer. The cartel “persuaded” the growers who resisted through violent attacks, either by burning down farms or kidnapping or murdering a family member. By some estimates, the extortion produced 1 billion pesos (US$50 million) for the cartel annually. The cartel eventually came to own 10% of the avocado production operations in Michoacán.

The cartel used a similar extortion scheme on a smaller scale with lime producers in 2014, which along with disease and distribution problems contributed to a spike in lime prices that year (SourceMex, April 23, 2014).

Tired of having to pay a large share of their profits to the cartels, local growers—avocado and lime producers—joined with other residents of rural Michoacán to defend their economic interests. The effort gave way to the creation self-defense groups (SourceMex, Jan. 22, 2014, and April 2, 2014).

A report published in the daily newspaper El Universal in early 2016 said the self-defense groups allowed many communities to regain control over their agricultural operations. In one community, residents are proud to declare that they no longer pay the extortion fee of 1,000 pesos (US$51) per hectare to the Caballeros. “Tacintaro, a community 100% free of cartels,” reads a sign at the entrance of the town.
The retreat of the Caballeros Templarios coincides with the death or arrest of several cartel leaders (SourceMex, April 2, 2014, and March 11, 2015), which allowed the self-defense groups to regain control over their lands. The lucrative nature of avocado production and exports has brought in other criminal groups, including the Cartel Jalisco Nueva Generación (CJNG), which has recently moved into some of the areas that the Caballeros Templarios once controlled (SourceMex, May 13, 2015).

“Not everything is quiet. New criminal organizations have appeared, the murders continue, and some producers are reporting extortions,” Margot Castañeda wrote in a blog for Excélsior. “Even so, the growers from Michoacán remain kings of the avocado, and we hope they continue to defend their lands and their work as true sovereigns.”

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