The U.S. Tomato Industry: An Overview of Production and Trade

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Introduction

Tomatoes are one of the world's most consumed vegetable crops. According to the United Nations Food and Agricultural Organization statistics, around 340 billion pounds (170 million tons) of fresh and processing tomatoes were produced globally in 2014. The harvested area covered 12.4 million acres (5 million hectares) of farm land. The world production of tomatoes has been consistently increasing over the last decades. It grew more than 54% from 2000 to 2014 (FAO, 2017). China is the largest producer of tomatoes followed by the United States and India. Other major players in the tomato market are the EU and Turkey. Together, these top five tomato producers supply around 70% of global production. Mexico is the largest exporter of tomatoes in the world followed by Netherlands and Spain (The World Factbook, 2017). In 2016, Mexico, Netherlands, and Spain accounted for 25.1% (US$2.1 billion), 19% (US$1.6 billion), and 12.6% (US$1.1 billion) of world's total tomato exports, respectively (The World Factbook, 2017). In the United States, approximately 35 billion pounds (16 million tons) of tomatoes were produced in 2015; about 8% of the total production was fresh tomatoes that have much higher prices than processing tomatoes. In 2015, the total values of fresh tomatoes and processing tomatoes produced in the U.S. were $1.22 billion and $1.39 billion, respectively (USDA-AMS, 2017). Florida and California account for about two thirds of the national fresh tomato production (Wu, Guan, and Suh, 2017), while California alone accounts for roughly 95% of the processing tomato production (USDA-ERS, 2017). This article focuses on fresh-market tomatoes.

U.S. Fresh Tomato Production

The United States is one of the world's leaders in fresh tomato production. In 2015, 2.7 billion pounds of fresh tomatoes were produced in the United States. Domestic production accounts for about 40% of the total domestic demand for fresh market tomatoes. The rest of the demand is met by imports, mostly from Mexico and Canada. Over the past decade, fresh tomato production in the U.S. has exhibited a steady declining trend. The total production of fresh tomatoes dropped from 3.9 billion pounds in 2000 to 2.7 billion pounds in 2015 (Figure 1). One major reason is the increased competition from Mexico.

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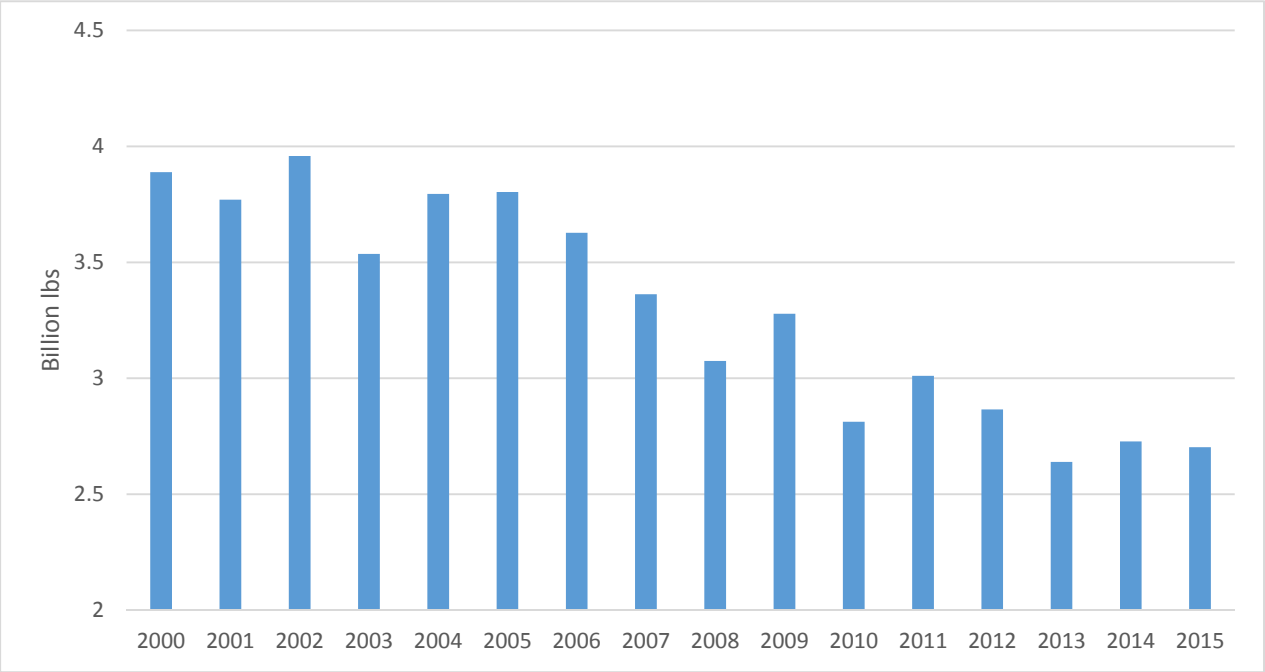

Figure 1: U.S. fresh tomato production, 2000 to 2015
Source: USDA, NASS

Fresh tomatoes are produced nationwide. California and Florida are the leading producers in the United States. Fresh-market tomatoes are produced across California year round except winter, whereas in Florida fresh field grown tomatoes are produced from October to June. Florida production peaks in April and May and again in November to January (USDA-NASS, 2016). Other top tomato-producing states are North Carolina, Virginia, Ohio, Tennessee, and Georgia; they generally produce in the summer months when Florida is out of the market. In 2015, together they supplied around 700 million pounds of fresh tomatoes to the market, which were lower than the amount those states supplied in 2000 (around 1 billion pounds).

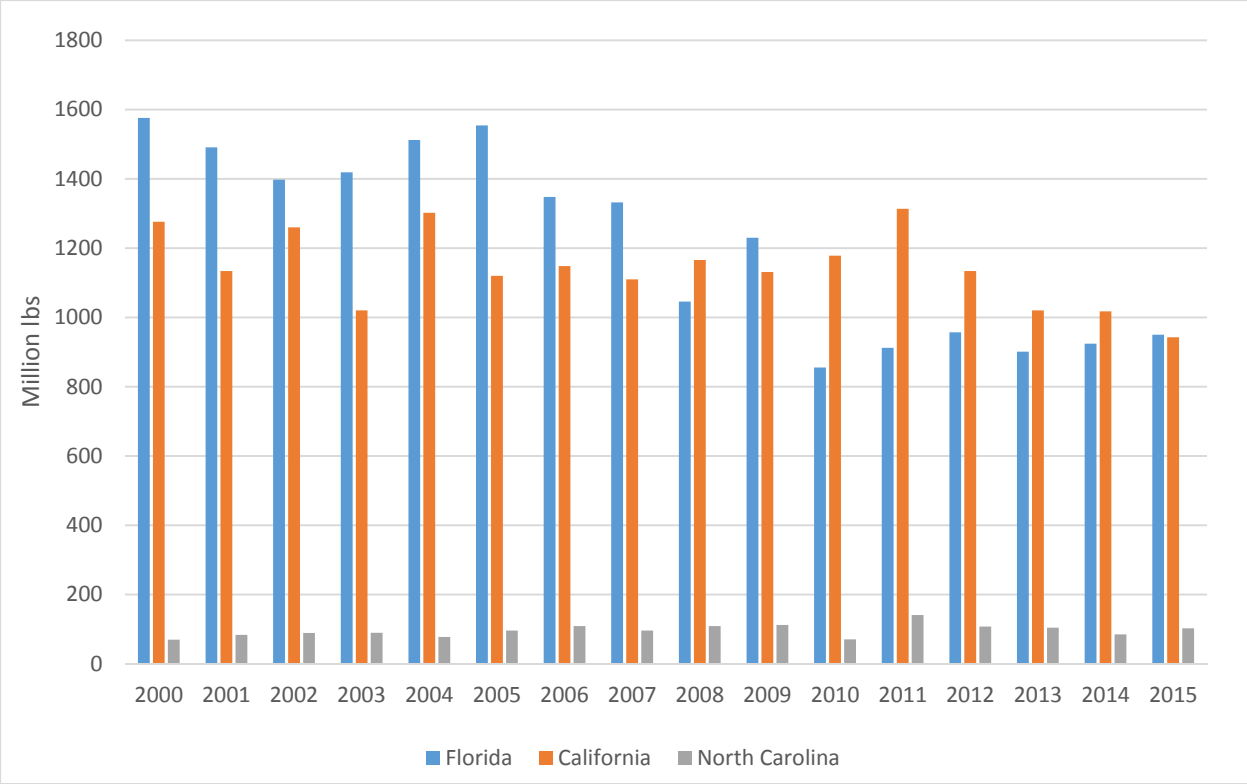

Figure 2: U.S. Fresh tomato production in the top three states, 2000 to 2015
Source: USDA, NASS

Florida ranks first in the nation in fresh tomato production. However, its production has been experiencing a steady decline over the past decade. Production fell from 1.56 billion pounds in 2000 to 950 million pounds in 2015, dropping nearly 40% (Figure 2). The harvested acreage in Florida also dropped from 39,400 acres in 2000 and 45,200 acres in 2005 to 33,000 acres in 2015 (Figure 3). Florida had the highest yield among the top three tomato-producing states before 2009 (Zhu, Guan, and Wu, 2013). However, Florida tomato yield has seen a sharp decline since. In 2000, the average yield was roughly 40,000 pounds per acre, but in 2015 the amount dropped to approximately 28,788 pounds per acre. The ban of the methyl bromide fumigant is one of the main reasons for the yield decline.

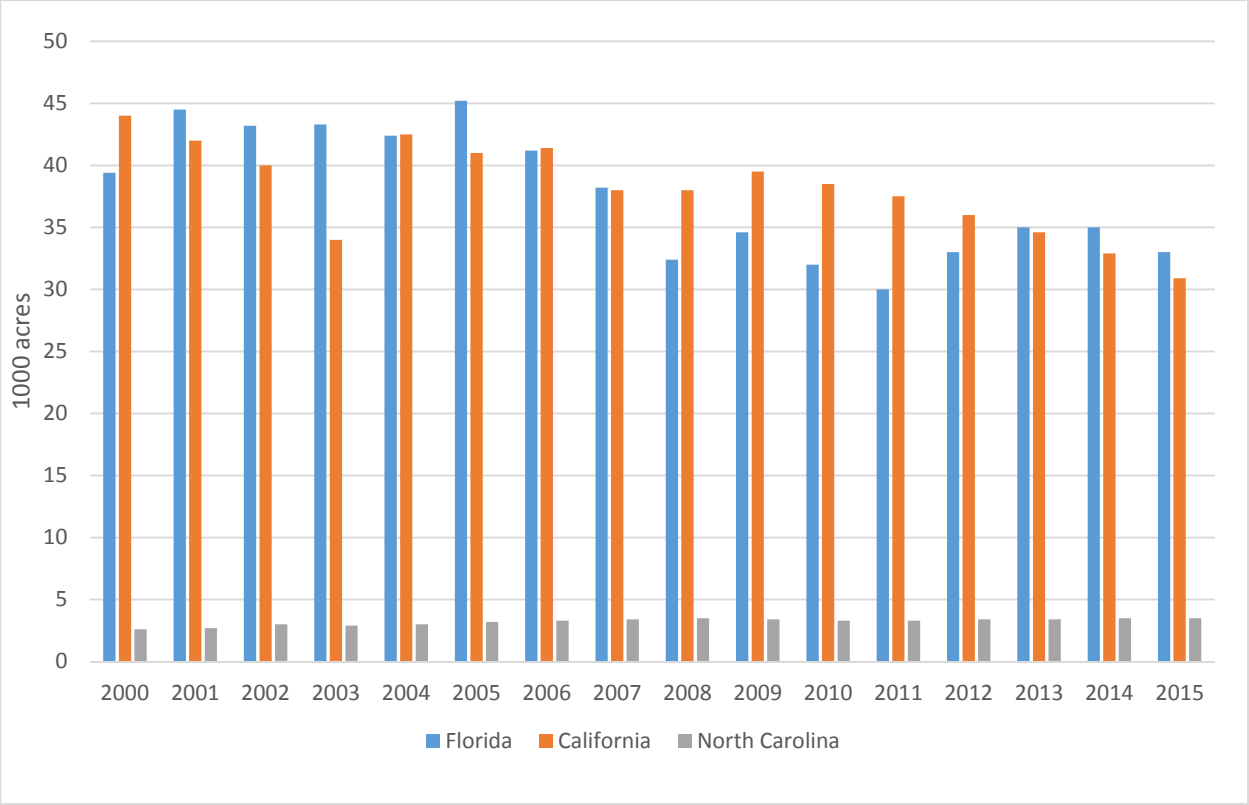

Figure 3: Fresh tomato acreage in the top three states, 2000 to 2015
Source: USDA, NASS

Tomato Prices

Tomato prices have fluctuated over the years, showing an increasing trend before 2006 and afterward a large variation (Figure 4). The market price is mainly governed by market supply and demand. Changes in acreage and weather influence the market price of tomatoes by influencing the quantity supplied in the market. The imports from Mexico also influence market price. On average, the price received for the U.S. fresh market tomatoes was around $30.7 per cwt (1 cwt=100 pounds) in 2000 and increased to $40.7 per cwt in 2016.

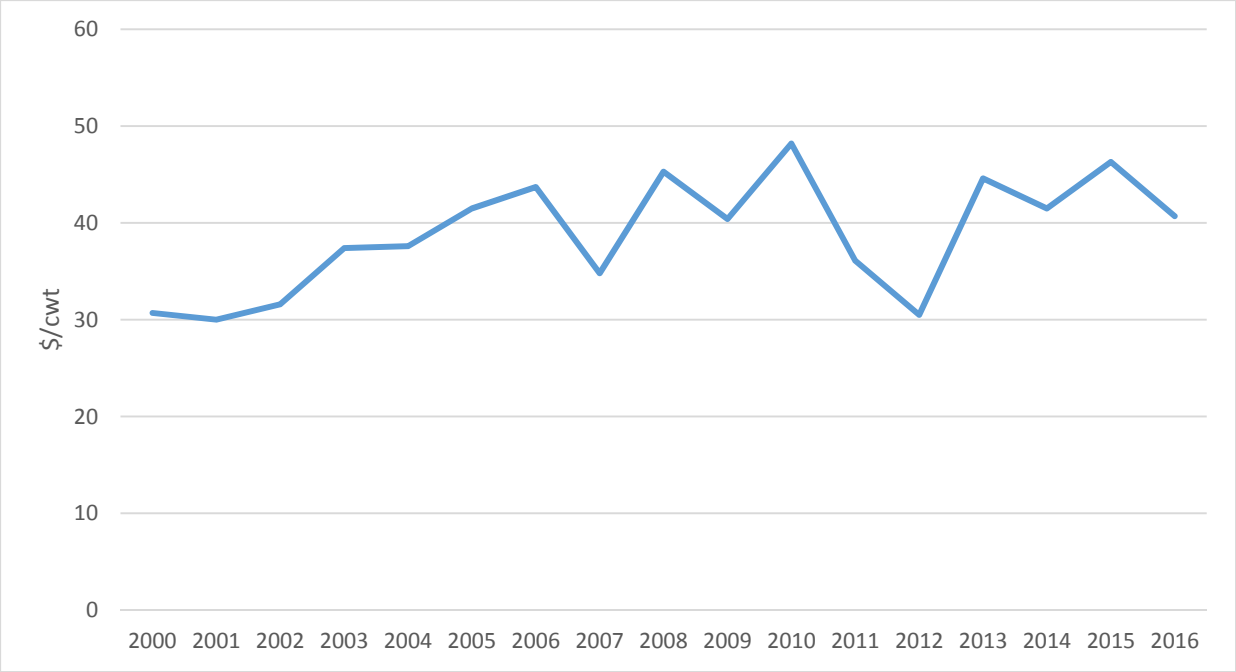

Figure 4: Price received for fresh market tomatoes in the U.S., 2000 to 2016
Source: USDA, NASS

U.S. Fresh Tomato Trade

U.S. imports of tomatoes have been rising consistently over the last 15 years. In 2000 total imports were around 1.61 billion pounds, up to a record 3.66 billion pounds in 2016 (Figure 5). U.S. fresh tomato exports have been low compared to total imports. Total U.S. exports have stayed relatively steady; they were about 0.46 billion pounds in 2000 and dropped to 0.41 billion pounds in 2016 (Figure 5). A major portion of the U.S. exports goes to Canada, and a small portion goes to Mexico. Exports to Mexico showed a strong growth in 2009, but with the increase of Mexican production the demand for U.S. imports dropped quickly. Taken together, net imports have shown a steadily increasing trend following the pattern of total imports. The net imports were 1.1 billion pounds in 2000 and reached a record high of 3.2 billion pounds in 2016 (Figure 5).

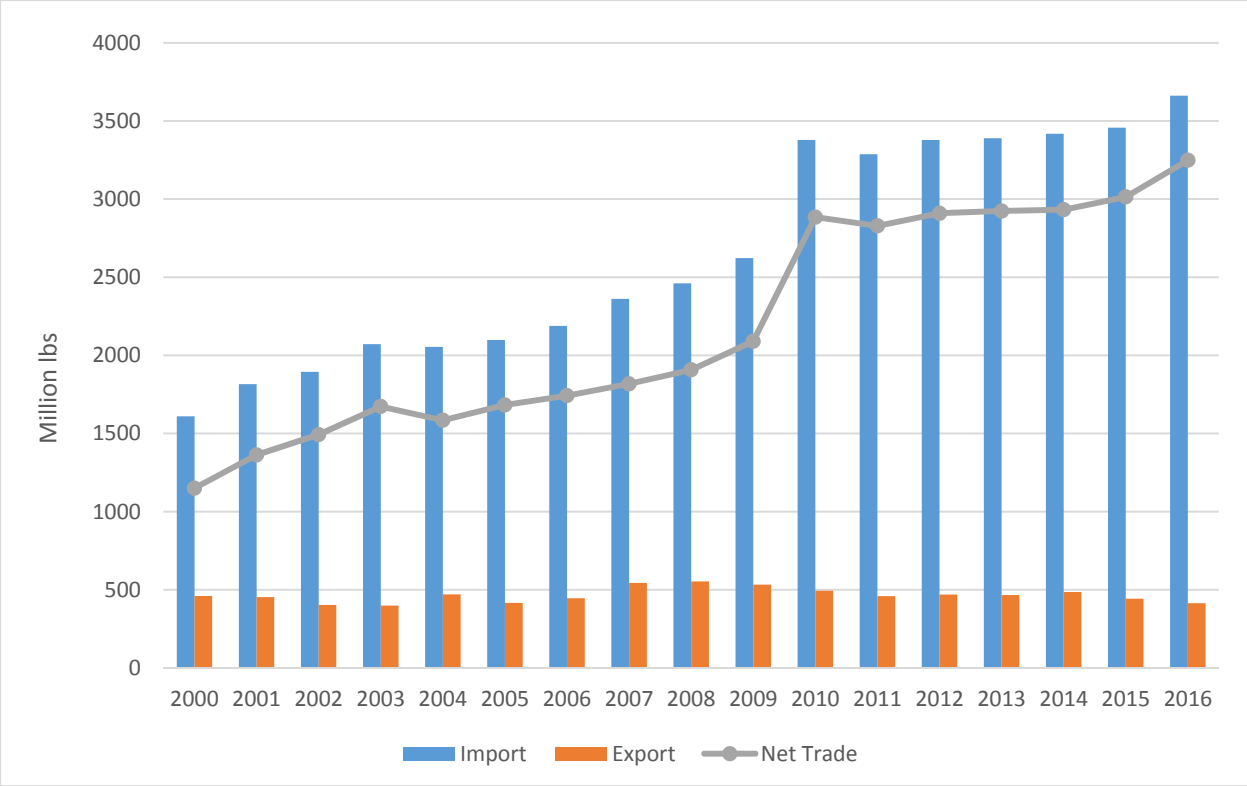

Figure 5: U.S. fresh tomato trade, 2000 to 2016
Source: U.S. Department of Commerce

Figure 6 shows the shares of different countries in U.S. fresh market tomato imports. Mexico is the leading exporter of fresh tomatoes to the U.S., followed by Canada and the Dominican Republic. Imports of Mexican tomatoes have had a tremendous impact on the U.S. tomato industry. Mexican imports accounted for 90% of the imported tomatoes in 2015. The import amount was more than three times higher than total Florida production. In contrast, the total share of Mexican tomatoes in the U.S. market during 2000 was about 20% less than Florida's supply (Figure 7). Figure 7 shows the diverging trends of tomato production in Florida and imports from Mexico. Florida production fell from 1.5 billion pounds to 0.95 billion pounds from 2000 to 2015, while the imports from Mexico increased from 1.3 billion pounds to 3.1 billion over the same period.

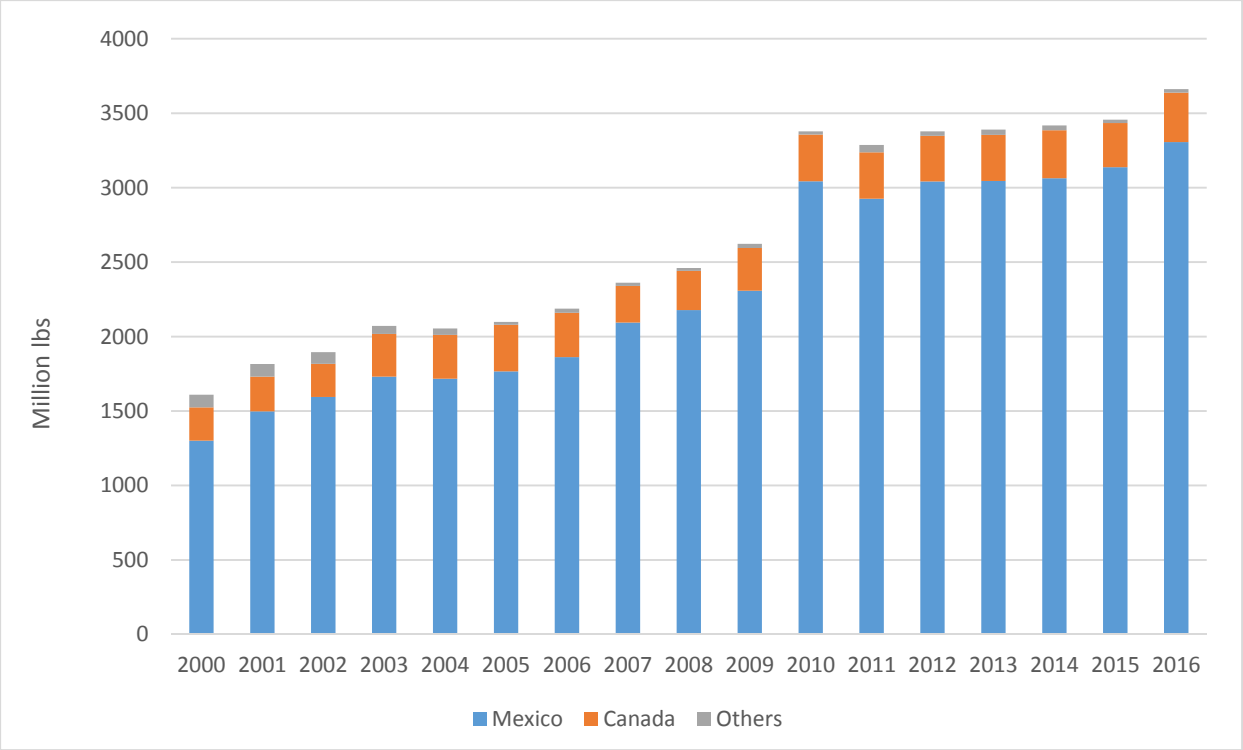

Figure 6: US fresh tomato imports from Mexico, Canada and other countries
Source: U.S. Department of Commerce

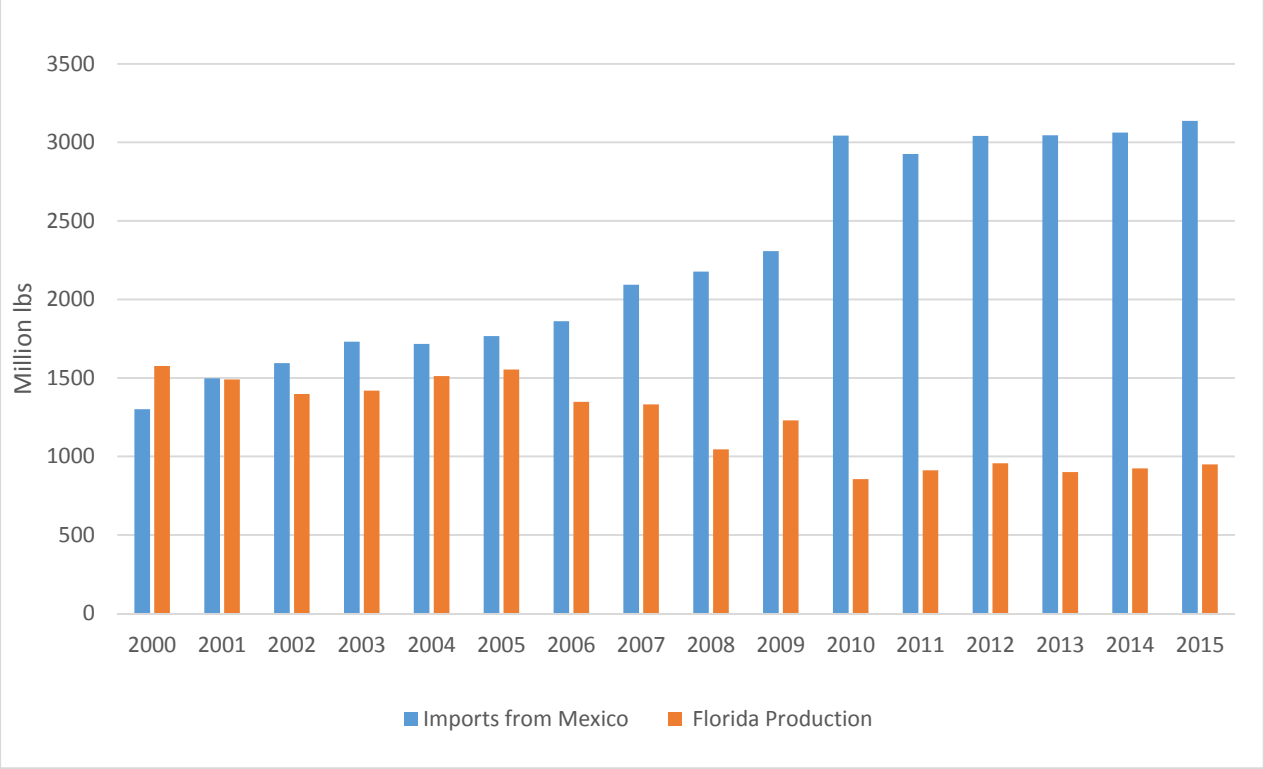

Figure 7: Florida production & U.S. imports from Mexico, 2000-2015
Source: U.S. Department of Commerce

Mexican producers have lower labor costs and favorable government policies, which give them a competitive advantage over the U.S. counterparts, leading to a consistent increase in Mexican production over the years. A labor cost analysis shows that the labor cost in Central Mexico was significantly lower than in Florida (Wu, Guan, and Garcia-Nazariega, 2017). At the same time, the Mexican government has been encouraging adoption of the protected-culture technologies in the horticulture industry. According to a study by Victoria, van der Valk, and Elings (2011), the Ministry of Agriculture (Secretaría de Agricultura, Ganadería, desarrollo Rural, Pesca y Alimentación, or SAGARPA) provided 925.7 million Mexican pesos of subsidy for 1,220 ha (3014.68 acres) of greenhouses between 2001 and 2006. The support was further increased in 2007 and 2008 and SAGARPA provided an additional 1,401.1 million Mexican pesos for 983 ha of protected agriculture in 2007 and 420 ha in 2008. In 2009, the Mexican government further introduced its Strategic Project for Protected Agriculture, which provided subsidies for various protected production practices, including greenhouses and high tunnels. Under this program, subsidies were available for new installations, with up to 50% of the total costs or a maximum amount set according to the type of technology. For example, the subsidy rate for high tunnels was 200,000 pesos per hectare with a maximum amount of 1.5 million pesos per project, and 1.2 million pesos per hectare up to 3 million pesos per project for greenhouses (Diario Oficial, 2010; Victoria, van der Valk, and Elings, 2011). Due to the favorable policies by the Mexican government, there was a large jump in protected acreage. In 2012, the protected acreage for tomatoes alone was 34,595 acres (USDA-FAS, 2013). Protected production technologies increase yields and give producers certain degrees of control over factors like weather and pests. It allows Mexican producers to supply products year round to the US market by extending the regular growing season.

Concluding Remarks

This study provides an overview of the U.S tomato industry. Over the last few years, the U.S. tomatoes, especially Florida tomatoes, have been facing heavy competition from Mexico and showing a declining trend. Favorable governmental support and lower cost of production make Mexican tomatoes more competitive than the U.S tomatoes. At the same time, the NAFTA eliminated trade barriers and encouraged year-round imports from Mexico. Increasing imports coupled with production issues at home such as labor shortages and the phase-out of methyl bromide have significantly affected the market share and profitability of the U.S. growers. The government should take measures to help the industry resolve labor shortages and encourage research and development of labor-saving technologies such as mechanical harvesting to make the industry more competitive.

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