Economic Impacts of Increased U.S. Imports of Fresh Produce from Mexico by 2023

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Introduction

Produce imports from Mexico are a major source of economic activity in the Lower Rio Grande Valley of Texas. The United States imported $10.45 billion of produce and products from Mexico during 2015, including fresh, frozen and processed fruits, vegetables, and nuts. About 98 percent of these imports entered the United States by land ports between Mexico and Texas, New Mexico, Arizona, and California. When considering only fresh fruits and vegetables, which is nearly ninety percent of the total, imports totaled $9.13 billion. These imports were shipped in 431,373 forty-thousand pound truckloads. About 49 percent of U.S. fresh fruit and vegetable imports from Mexico worth $4.6 billion entered through Texas land ports, arriving in 209,817 truckloads.

Baseline Projection

Over the next five to seven years, produce imports from Mexico are expected to grow with the majority of this growth coming into the United States via Texas. In an effort to quantify how much U.S. produce imports from Mexico are expected to grow by 2023, a linear trend forecasting approach was used to estimate the volume and flow of imports based upon trends that were present from 2007-2015. Linear trend analysis was conducted in order to develop a baseline estimate. This is a conservative approach because no significant changes are considered; therefore, it represents a baseline for growth in imports from Mexico and assumes that the future will be reflective of the past. Further, it is assumed that the mix of imports will remain relatively stable over the time period.

Based upon the assumptions above, it is estimated that U.S. fresh produce imports from Mexico via truck will increase to 569,650 truckloads, or 32 percent above 2015 levels by 2023 (Figure 1). Most of this growth will occur through Texas ports with imports expected to grow by 42 percent to 298,542 truckloads. By 2023, Texas is estimated to account for 52.4 percent of all U.S. produce imports from Mexico as compared to 48.6 percent in 2015. This growth in imports has implications throughout the border economy in general and the Texas economy in particular.

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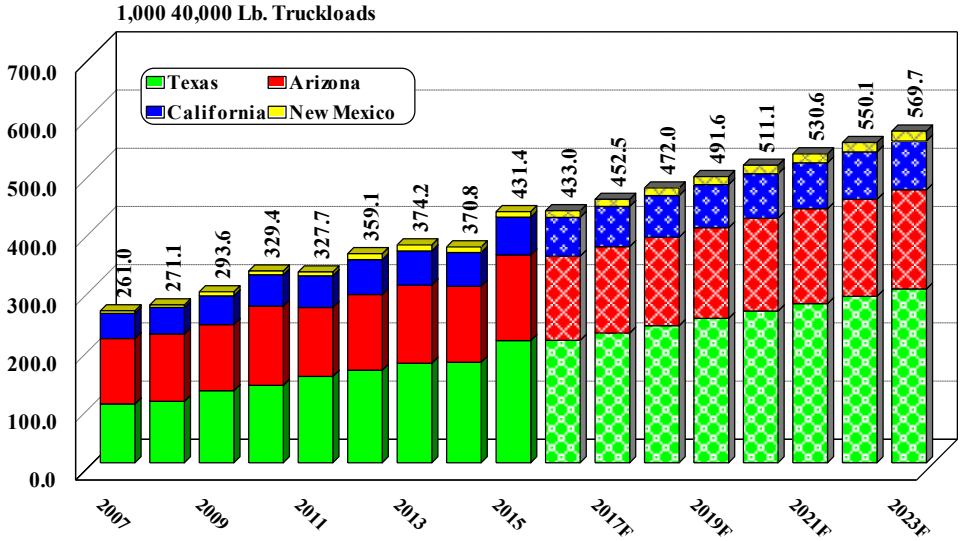
This research updates CNAS Issue Brief 2013-04, September 2013 by Palma, Adcock, Rosson and Hanselka. For additional information, please contact lribera@tamu.edu or fjadcock@tamu.edu, or call 979-845-3070. http://cnas.tamu.edu.

Figure 1. U.S. Imports of Fresh Produce from Mexico by Truck Baseline, 2007-2023F



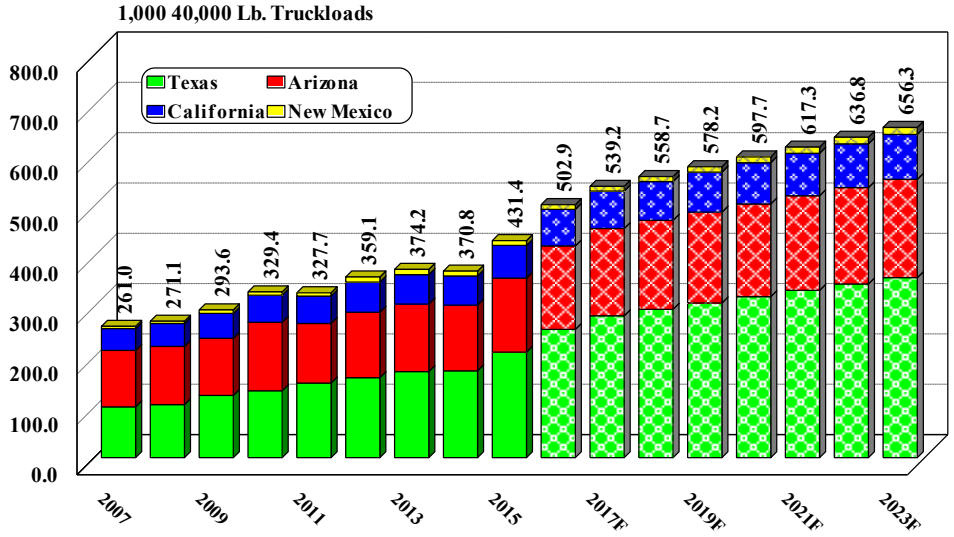
Source: Agricultural Marketing Service, USDA and Department of Agricultural Economics, Texas A&M Univerisy Systen
2016-2023 Forecast based on 2007-2015 Model

Additional Information Considered

Following the development of the baseline forecast, additional factors were included and information was acquired from industry experts in an effort to develop a more accurate forecast of U.S. produce imports from Mexico. One important factor is U.S. interest rates are expected to rise over this time period, causing the dollar to appreciate which will spur even more imports. Another important factor for the increase in fresh produce imports through Texas is the improvement of Mexican Federal Highway 40 between Mazatlan and Reynosa, particularly the Mazatlan to Durango portion with the construction of the Baluarte bridge and 114 additional bridges and 61 tunnels in that portion of the highway. The new portion of the highway covers more than 140 miles and replaced the existing Devil's backbone road built in the 1940s. These infrastructure improvements could reduce transportation time by six or more hours between Mazatlan and the LRGV and shave $500 to $1,500 off of truck transportation costs per load. Finally, while not a trend, data show that produce imports through Texas are up by 30.3 percent for January 2016 as compared to January 2015, which is more than expected, while Arizona is up by less than 0.1 percent.

Incorporating this additional information together with input from produce industry experts, shippers and brokers, a revised forecast was developed as shown in Figure 2. This forecast assumes that the 2016 shipment growth rate for each border state is the same as each grew in 2015, followed by a 2017 growth rate equal to that of each state's 2013-2015 average growth. For 2018-2023, each state will return to their respective 2007-2015 trend growth. This set of assumptions allows for more recent trends to drive short and medium-term projections and historical trends to apply for long-term estimates.

Figure 2. U.S. Imports of Fresh Produce from Mexico following Industry Input, 2007-2023F



Source: Agricultural Marketing Service, USDA and Department of Agricultural Economics, Texas A&M Univerisy Systen
2016-2023 Forecast based on 2007-2015 Model and Industry Input

The results of this forecast show overall fresh fruit and vegetable imports from Mexico growing to 656,303 truckloads by 2023, or a 52.1 percent increase over 2015. Texas ports, mainly in the Lower Rio Grande Valley, will handle nearly 55 percent of these imports at 357,881 truckloads. While this is 71 percent more than 2015 levels for Texas, the estimate is justified in large part due to higher recent growth in imports through Texas due to Mexican highway, bridge and cold storage improvements. These improvements will not only attract produce that was previously shipped through western U.S. destinations, but may also attract some imports from Central America, South America, and possibly Asia.

While these estimates are based upon the best available current information and solid assumptions regarding future trends, it is likely that actual numbers will be slightly different than the forecast. For instance, Arizona imports are expected to grow much slower than Texas when considering the combination of decreases in truck crossings due to Mexican Highway 40 and increased demand in the western United States. However, it is possible that either factor is more dominant, leading to either a higher or lower trend during 2016-2017.

Estimated Economic Impacts

When considering the entire U.S./Mexico border region of Texas, New Mexico, Arizona and California, there was a minimum of $480.2 million of direct economic output attributed to produce imports from Mexico during 2015 (Table 1). By 2023, this is expected to grow to $729.8 million with the leading sectors where import-related output occurred were warehousing at $255.7 million and truck transportation at $196.7 million, followed by sorting, grading and packing ($125.0 million), customs brokering

Table 1. Summary of Economic Activity from U.S. Produce Imports from Mexico over Land Borders, 2015 and 2023 Forecast with Industry Input

	TX/NM/AZ/CA		Texas	
	2015	***2023F***	***2015***	***2023F***
Total Truckloads	431,373	656,303	209,817	357,881
Direct Economic Output	*Million Dollars*			
Warehousing	$168.2	$255.7	$81.8	$139.9
Truck Transportation	$129.4	$196.7	$62.9	$107.6
Sorting, Grading and Packing	$82.2	$125.0	$46.9	$80.2
Customs Brokering	$64.7	$98.4	$31.5	$53.8
Miscellaneous Border Services	$35.6	$54.1	$17.3	$29.6
Total Direct Economic Output	$480.2	$729.8	$240.4	$411.2
Total Supporting Economic Output	$535.7	$814.4	$236.3	$404.0
Total Economic Output	$1,015.9	$1,544.2	$476.7	$815.2
Total Jobs Supporting Produce Imports	8,485	12,897	4,510	7,712

($98.4 million), and miscellaneous border services ($54.1 million). This direct output will require an additional $814.4 million in economic activity from supporting industries for a total economic impact of $1.54 billion. Leading supporting industries include real estate with $113.3 million, business services ($88.8 million), financial services ($73.5 million), health care ($54.1 million), wholesaling ($38.3 million), retail ($33.4 million), food and drinking businesses ($31.6 million), and other transportation ($29.5 million).

Total employment in the four-state region associated with handling fresh produce imports in 2023 is estimated at 12,897 jobs. Most jobs were in sorting, grading and packing, 2,482 jobs, followed by warehousing with 2,302 jobs, 1,711 jobs in the customs brokering sector, truck transportation with 1,329 jobs, and 399 jobs in miscellaneous border services. Supporting industries with significant job impacts include business services with 860 jobs, food and drink establishments (492 jobs), health care (477 jobs), financial services (384 jobs), real estate (380 jobs), and retail (371 jobs).

Economic impacts of produce imports on Texas are also important. Direct economic activity attributed to the produce import industry was $240.4 million during 2015, requiring an additional $236.3 million in economic activity from supporting industries for a total economic impact of $476.7 million. By 2023, this is expected to grow to $411.2 million in direct activity and $404.0 million in supporting activity for a total of $815.2 million in economic activity throughout the Texas economy. Direct output will be led by warehousing at $139.9 million and followed by the truck transportation

($107.6 million), sorting, grading and packing ($80.2 million), customs brokering ($53.8 million), and miscellaneous border services ($29.6 million). Real estate ($52.7 million), business services ($44.5 million), financial services ($41.9 million), and healthcare ($27.8 million) will be the leading supporting industries in terms of output.

About 7,712 jobs will be required throughout the Texas economy to support these import operations during 2023. Sorting, grading and packing will require 2,165 jobs, followed by warehousing (1,151 jobs), customs broker services (974 jobs), truck transportation (726 jobs), and miscellaneous border services (247 jobs). Business services with 449 jobs will be the leading supporting sector in terms of employment, followed by food and drink establishments (263 jobs), health care (256 jobs), financial services (228 jobs), real estate (197 jobs), and retail (195 jobs).

Conclusion

The economic impacts of U.S. produce imports from Mexico on southwestern land ports of entry are substantial, expected to total $1.54 billion by 2023 as these imports continue to grow over the next five to seven years. Additional employment will occur as 12,897 jobs will be required to support this increase in economic activity. In Texas alone, the total economic activity to support the additional imports will be $815.2 million, along with 7,712 jobs. Any delays, disruptions or related barriers to entry of fresh produce causes a ripple effect in terms of economic and employment losses across a wide spectrum of regional economies.

Table 2. U.S. Produce Imports from Mexico over land borders, 40,000# Equivalent Loads

BASELINE: Linear Trend Projection for each state and total United States

	Texas	Arizona	California	New Mexico	Total	Texas as % of Total	Texas Growth Rate
2007	101,025	112,327	43,264	4,378	260,992	38.7%	------
2008	105,522	115,609	45,713	4,304	271,147	38.9%	4.5%
2009	123,777	113,495	49,417	6,938	293,627	42.2%	17.3%
2010	133,039	136,031	53,849	6,462	329,381	40.4%	7.5%
2011	148,331	118,389	54,479	6,496	327,694	45.3%	11.5%
2012	158,968	130,019	60,006	10,154	359,147	44.3%	7.2%
2013	171,064	134,168	58,638	10,355	374,224	45.7%	7.6%
2014	172,648	130,549	57,989	9,594	370,779	46.6%	0.9%
2015	209,817	147,191	64,882	9,484	431,373	48.6%	21.5%
2016	210,220	144,720	66,573	11,475	432,989	48.6%	0.2%
2017	222,837	148,381	69,038	12,256	452,512	49.2%	6.0%
2018	235,455	152,041	71,503	13,036	472,035	49.9%	5.7%
2019	248,072	155,701	73,968	13,816	491,558	50.5%	5.4%
2020	260,690	159,361	76,433	14,597	511,081	51.0%	5.1%
2021	273,307	163,021	78,898	15,377	530,604	51.5%	4.8%
2022	285,925	166,681	81,363	16,157	550,127	52.0%	4.6%
2023	298,542	170,342	83,828	16,938	569,650	52.4%	4.4%

2016-2023 estimates are forecast based on 2007-2015 data.

Source: USDA/AMS Market News Portal – Fruits and Vegetables

	Texas	Arizona	California	New Mexico	Total
Growth from '15	**42.3%**	**15.7%**	**29.2%**	**78.6%**	**32.1%**

Table 3. U.S. Produce Imports from Mexico over land borders, 40,000# Equivalent Loads

Assumptions: Industry Input and Other Factors Considered, 2016 shipment growth rate for each border state is the same as each grew in 2015, followed by a 2017 growth rate equal to that of each state's 2013-2015 average growth. For 2018-2023, each state will return to their respective 2007-2015 trend growth.

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2015	209,817	147,191	64,882	9,484	431,373	48.6%	21.5%
2016	254,988	165,954	72,594	9,375	502,911	50.7%	21.5%
2017	282,176	173,260	74,560	9,168	539,165	52.3%	10.7%
2018	294,794	176,920	77,025	9,949	558,688	52.8%	4.5%
2019	307,411	180,580	79,490	10,729	578,211	53.2%	4.3%
2020	320,029	184,240	81,955	11,509	597,734	53.5%	4.1%
2021	332,646	187,900	84,420	12,290	617,257	53.9%	3.9%
2022	345,264	191,561	86,885	13,070	636,780	54.2%	3.8%
2023	357,881	195,221	89,350	13,850	656,303	54.5%	3.7%

2016-2023 estimates are forecast based on 2007-2015 data and industry input.

Source: USDA/AMS Market News Portal – Fruits and Vegetables.

	Texas	Arizona	California	New Mexico	Total
Growth from '15	**70.6%**	**32.6%**	**37.7%**	**46.0%**	**52.1%**