



Economic Impacts of U.S. and Texas Agricultural Exports to Canada and Mexico

CNAS Issue Brief 2017-01

February 16, 2017

Introduction

The North American Free Trade Agreement (NAFTA), negotiated between the United States, Canada and Mexico and initiated on January 1, 1994, has been extensively studied over the years. NAFTA was designed to expand the flow of goods, services, and investment throughout North America. NAFTA calls for the full phased elimination of import tariffs and the elimination or fullest possible reduction on nontariff trade barriers, such as import quotas, licensing schemes, and technical barriers to trade.

The United States is the world's largest exporter of agricultural and food products and those exports account for about 35 percent of U.S. farm income, up from 28 percent in 1996. U.S. Agricultural exports have increased from 46.2 billion in 1994 to \$134.9 billion in 2016, a 192 percent increase. During the same period, U.S. agricultural exports to Canada and Mexico grew from \$10 billion to \$38 billion, a 288 percent increase, making Canada and Mexico the second and third largest markets for U.S. agricultural exports (For detailed information on U.S. agricultural exports to Canada and Mexico, see Appendix 1). In terms of total trade, Canada and Mexico are the first and second agricultural trade partners for the United States with two-way trade values of \$41.8 billion and \$40.8 billion in 2016, respectively.

Canada and Mexico are important markets for Texas agricultural exports as well. In 2016, Texas exports to Mexico totaled \$833.5 million of which \$270.8 million were animal products and \$562.8 were plant products. The top four Texas agricultural exports to Mexico were beef and veal valued at \$141.7 million, cotton, \$125.4 million, sweeteners, \$64.5 million, and corn, \$62.4 million (Appendix 1). Texas agricultural exports to Canada totaled \$875.1 million of which \$222.6 million were animal products and \$652.6 were plant products. The top four Texas agricultural exports to Canada were other horticultural products, \$230.3 million, followed by beef and veal, processed grain products, and food preparations \$110.2 million, \$77.6 million, and \$77.3 million, respectively.

Economic Impact

The economic impacts U.S. and Texas agricultural exports to Canada and Mexico were estimated using IMPLAN, an economic input/output model. Economic multipliers for each sector of the economy were used to estimate how agricultural export sales affects business activity, income and employment in other sectors of the economy that supply inputs and services to the agricultural industry.

IMPLAN estimates indicate that the total business activity supporting U.S. agricultural exports to Canada and Mexico was \$107.8 billion in 2016 (Table 1). This includes direct output, or exports, of \$38.1 billion, and another \$69.8 billion of output in support of these exports. Of these supporting sectors, \$41.7 billion of output is for inputs required to support the exports, including other agricultural sectors, transportation, wholesale, business services, real estate, and financial services. An additional \$28 billion in induced output is generated by household and related expenditures of income in sectors such as financial services, real estate, and business services as well as health care, retail trade, and eating and drinking places. U.S. agricultural exports to Canada and Mexico employs directly or indirectly 509,332 people. Employment used to produce U.S. agricultural products to be exported to Canada and Mexico is estimated to be 144,726 jobs. The balance of employment, or 464,606 jobs, is located in other sectors including other agriculture, 84,351 jobs; business services, 32,193 jobs; healthcare, 25,626 jobs; eating and drinking places, 24,314; Transportation, 19,035 jobs. The remaining jobs are spread among numerous sectors.

Moreover, IMPLAN estimates indicate that the total business activity supporting Texas agricultural exports to Canada and Mexico was \$3.3 billion in 2016 (Table 1). This includes exports of \$1.7 billion and supporting economic output of \$1.6 billion. Of these supporting sectors, \$1.1 billion of output is for inputs required to support the exports and an additional \$523 million in induced output is generated by household and related expenditures of income. Sectors supporting Texas exports to Mexico and Canada are similar to the sectors supporting U.S. exports to Mexico and Canada. Texas agricultural exports to Canada and Mexico employs directly or indirectly 18,674 people. Employment used to produce Texas agricultural products to be exported to Canada and Mexico is estimated to be 7,554 jobs. The balance of employment, or 11,120 jobs, is located in other sectors such as other agriculture, 4,671 jobs; business services, 729 jobs; transportation, 593 jobs; eating and drinking places, 609; healthcare, 599 jobs.

Table 1. Estimates Impacts of 2016 U.S. and Texas Agricultural Exports to Canada and Mexico

Estimated Impacts of 2016 US Exports to Canada			Estimated Impacts of 2016 TX Exports to Canada		
ImpactType	Output <i>Million \$</i>	Employment <i>Jobs</i>	ImpactType	Output <i>Million \$</i>	Employment <i>Jobs</i>
Direct Effect	\$20,242	92,160	Direct Effect	\$875	4,301
Indirect Effect	\$19,336	89,219	Indirect Effect	\$492	3,276
Induced Effect	\$15,340	92,151	Induced Effect	\$274	1,824
Total Effect	\$54,918	273,530	Total Effect	\$1,641	9,401
Estimated Impacts of 2016 US Exports to Mexico			Estimated Impacts of 2016 TX Exports to Mexico		
ImpactType	Output <i>Million \$</i>	Employment <i>Jobs</i>	ImpactType	Output <i>Million \$</i>	Employment <i>Jobs</i>
Direct Effect	\$17,850	52,566	Direct Effect	\$834	3,253
Indirect Effect	\$22,387	107,150	Indirect Effect	\$608	4,359
Induced Effect	\$12,664	76,086	Induced Effect	\$249	1,660
Total Effect	\$52,901	235,801	Total Effect	\$1,691	9,272
Estimated Impacts of 2016 US Exports to NAFTA			Estimated Impacts of 2016 TX Exports to NAFTA		
ImpactType	Output <i>Million \$</i>	Employment <i>Jobs</i>	ImpactType	Output <i>Million \$</i>	Employment <i>Jobs</i>
Direct Effect	\$38,092	144,726	Direct Effect	\$1,709	7,554
Indirect Effect	\$41,723	196,368	Indirect Effect	\$1,101	7,635
Induced Effect	\$28,004	168,238	Induced Effect	\$523	3,485
Total Effect	\$107,819	509,332	Total Effect	\$3,332	18,674

Summary

Agricultural exports to Canada and Mexico are very important for the United States and Texas. Total economic activity for U.S. agricultural exports to Canada and Mexico were \$107.8 billion in 2016 accounting for a total of 509,332 jobs. Total economic activity for Texas agricultural exports to Canada and Mexico were over \$3.3 billion and supporting 18,674 jobs.

For further information, please contact Luis Ribera, Extension Economist and Director, Center for North American Studies, Department of Agricultural Economics, Texas A&M University, College Station, Texas 77843-2124. Telephone: 979-845-3070; e-mail: lribera@tamu.edu. Contributing to this report were Flynn Adcock, International Program Coordinator, and Dan Hanselka, Extension Associate.

Appendix 1. U.S. and Texas Agricultural Exports to Canada and Mexico, 2016.

	US Exports to Canada - \$1,000	US Exports to Mexico - \$1,000	TX Exports to Canada - \$1,000	TX Exports to Mexico - \$1,000
Beef and veal	\$758,117	\$974,913	\$110,154	\$141,655
Pork	\$793,378	\$1,327,619	\$8,568	\$14,338
Hides and skins	\$148,987	\$153,202	\$17,402	\$17,894
Other livestock products 1/	\$460,009	\$555,405	\$23,644	\$28,548
Milk manufacturing	\$500,000	\$131,022	\$25,450	\$6,669
Butter	\$39,939	\$6,923	\$2,033	\$352
Dry milk	\$89,412	\$629,131	\$4,551	\$32,023
Cheese	\$66,991	\$362,174	\$3,410	\$18,435
Ice cream	\$10,708	\$100,000	\$545	\$5,090
Broiler meat	\$345,369	\$519,712	\$24,418	\$36,744
Other poultry products 2/	\$316,776	\$610,977	\$12,924	\$24,928
Vegetables, fresh	\$1,801,171	\$270,967	\$28,639	\$4,308
Vegetables, processed	\$1,239,558	\$381,329	\$19,709	\$6,063
Fruits, fresh	\$1,615,992	\$510,233	\$11,474	\$3,623
Fruits, processed	\$479,520	\$103,407	\$3,405	\$734
Tree nuts	\$816,454	\$351,973	\$7,838	\$3,379
Rice	\$148,530	\$271,429	\$6,951	\$12,703
Wheat	\$17,899	\$611,448	\$863	\$29,472
Corn	\$144,996	\$2,578,268	\$3,509	\$62,394
Sorghum	\$1,375	\$119,843	\$331	\$28,822
Feeds and other feed grains 3/	\$116,677	\$266,951	\$1,167	\$2,670
Grain products, processed	\$2,068,316	\$955,853	\$77,562	\$35,844
Soybeans	\$115,869	\$1,462,600	\$104	\$1,316
Soybean meal	\$280,865	\$800,501	\$253	\$720
Vegetable oils	\$546,254	\$528,802	\$2,786	\$2,697
Other oilseeds and products 4/	\$344,242	\$214,235	\$24,441	\$15,211
Cotton	\$579	\$339,494	\$214	\$125,375
Food preps	\$1,189,844	\$647,589	\$77,340	\$42,093
Beverages excl beer/wine	\$660,786	\$119,130	\$42,951	\$7,743
Beer	\$151,030	\$160,812	\$9,817	\$10,453
Wine	\$393,075	\$16,936	\$25,550	\$1,101
Sweeteners	\$550,631	\$992,249	\$35,791	\$64,496
Seeds, field/garden	\$287,773	\$298,969	\$18,705	\$19,433
Nursery & greenhouse	\$189,671	\$60,544	\$12,329	\$3,935
Tobacco	\$8,446	\$72,573	\$0	\$0
Other horticultural products	\$3,543,018	\$342,619	\$230,296	\$22,270
Total agricultural exports	\$20,242,257	\$17,849,832	\$875,123	\$833,532
Total animal products	\$3,322,636	\$4,272,850	\$222,561	\$270,775
Total plant products	\$16,919,621	\$13,576,982	\$652,561	\$562,757

Sources: GATS, FAS/USDA; State Shares of Exports, ERS/USDA; Quickstats, NASS/USDA.

1/ Includes other nonpoultry meats, animal fat, live farm animals, and other animal parts.

2/ Includes turkey meat, eggs, and other fowl products.

3/ Includes processed feeds, fodder, barley, oats, and rye.

4/ Includes peanuts (oilstock), other oil crops, corn meal, other oilcake and meal, protein substances, bran and residues.