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Report Highlights:

Amidst continuing supply chain concerns both in North America and around the globe, understanding how, where and when our bilateral trade with Mexico occurs is as important as ever for actors within food and agricultural sectors. U.S.-Mexico bilateral agricultural trade is increasingly complex in the diversity of products traded, modes of transport used, periods of the year that witness the highest volumes, and the commercial crossings or Ports of Entry (POEs) through which the trade funnels. Given the interdependent nature of bilateral agricultural trade with Mexico, this report covers north and southbound trade by both land and maritime channels but focuses most on southbound trade along the nearly 2,000-mile U.S.-Mexico border.

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EXECUTIVE SUMMARY

In recent years, the food and agricultural supply chains in Mexico and the United States have become increasingly integrated, efficient, and interdependent in both directions. The U.S.-Mexico border is one of the busiest in the world in terms of commerce, with thousands of cargo trucks crossing daily as well as multiple freight rail crossings. Southbound trade, especially shipments of grains and oilseeds, rely heavily on cross-border rail traffic, as well as ocean freight through the Gulf of Mexico.

In 2022 (Jan-Oct), 75 percent by volume and 86 percent by value of total U.S. agricultural and related product exports to Mexico were shipped overland via the U.S.-Mexico border. During the abovementioned timeframe, U.S. ports in New Orleans, Houston-Galveston, and Mobile accounted for the remaining 24 percent of volume and 13 percent of value. These were chiefly bulk shipments of grains and oilseeds, shipped via ocean freight through the Gulf of Mexico. Other U.S. seaports and airports handle less than 1 percent of U.S. agricultural exports to Mexico. Regarding northbound trade, Mexico's exports to the United States are more heavily oriented toward overland shipments, given the country's higher proportion of fresh and consumer-oriented goods which are transported by truck.

Along the U.S.-Mexico border, the Laredo district handles most agricultural trade in both directions. A mix of factors, including established industry supply chains, a higher number of commercial crossings with infrastructure to handle food and agricultural products, and the district's proximity to the largest population centers and key markets in both countries all help to explain its lead role in cross-border trade. Of the 29 individual commercial crossings or POEs along the U.S-Mexico border, this report provides details on the 9 most integral in terms of current agricultural trade capacity: Matamoros-Brownsville, Reynosa-McAllen, Nuevo Laredo-Laredo, Colombia-Laredo, Piedras Negras-Eagle Pass, Ciudad Juarez-El Paso, Nogales-Nogales, Mexicali-Calexico, and Tijuana-San Diego (San Ysidro/Otay-Mesa).

While the current environment of bilateral trade is one characterized by increasing integration and efficiency, challenges and disruptions are still a reality. Both volume and value of bilateral agricultural trade reached record levels in recent years, but the relationship was not spared from the COVID-19 pandemic, subsequent supply chain challenges, and both global and local disruptions. Despite the proximity and logistical advantages of U.S.-Mexico trade, swings in consumer demand, product price hikes and high transportation costs resulted in numerous challenges across the supply chain. Border infrastructure dedicated to commercial trade is also an area of constant change. Expansion and modernization of border infrastructure to handle the projected growth in trade volumes is a continual process involving a range of local, state and federal stakeholders in both countries.

While this report breaks out "modes-of transportation" by products and POEs, it only provides a snapshot at time of export/import. Many products require intermodal transportation along the entire supply chain, and this complexity is not always captured in this analysis. Data by volume is primarily expressed in metric tons (MT). A range of USDA, host country, and industry data sources are used.

SECTION I: SOUTHBOUND AGRICULTURAL TRADE

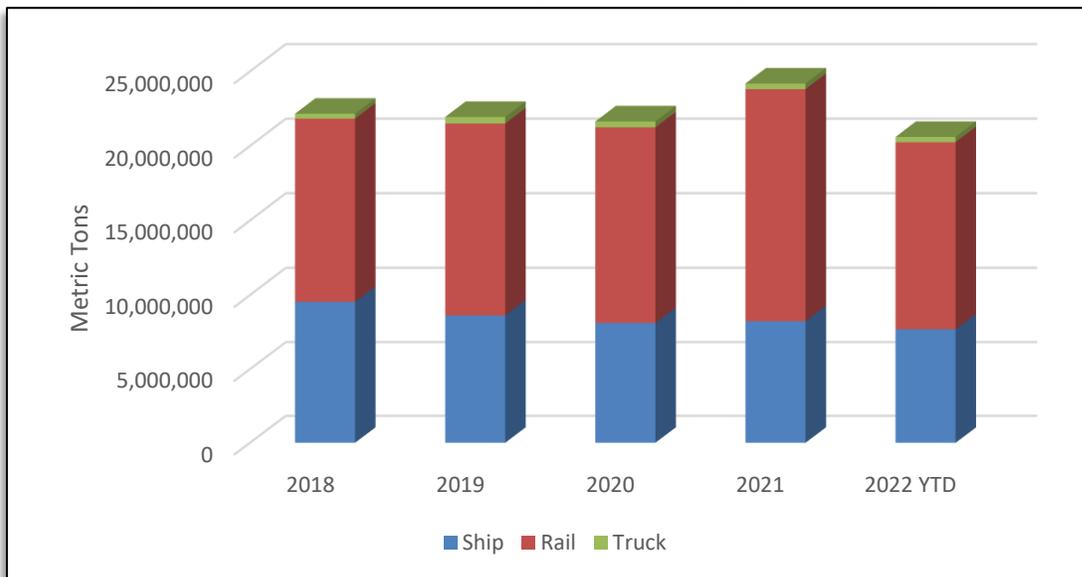
In 2021, U.S.-Mexico agricultural trade rebounded strongly from 2020, and the pace remained brisk through 2022, nearly matching the record pace of trade seen in 2021. In a high-cost environment, particularly for many food products, this high level of trade by value is perhaps less remarkable than the record-level volumes witnessed across multiple commodities in 2021. In 2022 YTD (Jan-Oct), the total volume of U.S. agricultural exports to Mexico is down by less than 1 percent.

While the Laredo district continues to handle the largest single share of U.S. agricultural exports to Mexico (49 percent of volume year-to-date), year-to-year trade volume is down by 5 percent. The New Orleans district has experienced a year-to-year uptick in trade by volume (+6 percent), driven primarily by higher trade in soybeans (+36 percent), wheat (+62 percent), and distiller’s dried grains with solubles (DDGS) (+38 percent). Along the land border, Nogales district experienced the largest year-to-year volume increase (+13 percent) based upon steady volumes of fresh, consumer-oriented products and a more robust trade in soybeans and corn. Nogales, in volume terms, is a much smaller POE accounting for 4 percent of total southbound volume.

A. U.S. BULK EXPORTS

According to data and reporting by USDA’s Agricultural Marketing Service (AMS), the United States exports approximately one-quarter of the grain it produces, and roughly 55 percent of that grain departs from the U.S. Gulf region. Bulk grains, oilseeds, legumes, and fiber account for a large share of U.S. agricultural exports to Mexico. In 2022 YTD, bulk exports account for an estimated 39 percent of export value. Both the U.S.-Mexico land border and Gulf of Mexico are vital avenues for this trade.

Figure 1: U.S. Bulk Grain/Oilseed Exports to Mexico by Mode of Transport



Source: USDA/AMS Federal Grains Inspection Service

Table 1: Volume of U.S. Bulk Exports to Mexico by Mode of Transport (MT, % Change)

Mode	2018	2019	2020	2021	% Change ('18-'21)
Truck	324,970	439,102	397,938	370,916	+14.1%
Rail	12,288,949	12,867,842	13,121,844	15,565,138	+26.7%
Ship	9,544,868	8,633,792	8,121,127	8,248,049	-13.6%
Total	22,158,787	21,940,736	21,640,909	24,184,103	+9.1%

Source: Federal Grains Inspection Service

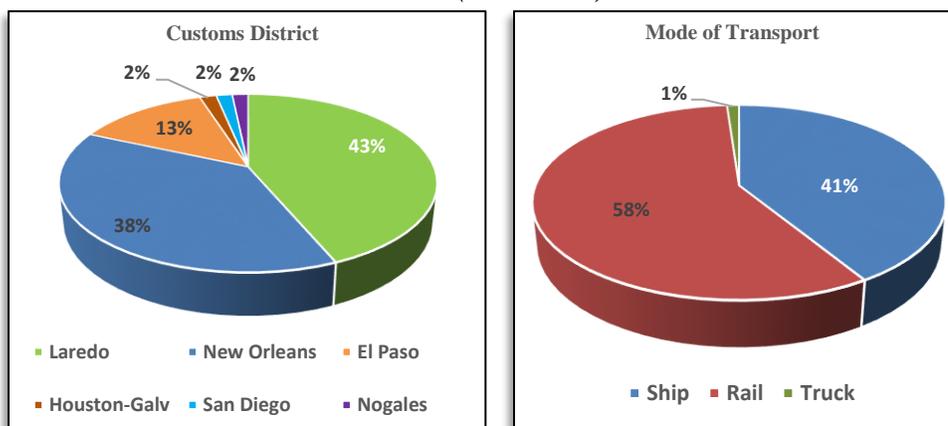
Includes All Grains/Oilseeds Inspected by FGIS (Barley, Corn, Canola, Flaxseed, Oats, Sorghum, Soy, Sunflower, Wheat). Corn, Sorghum, Soy, and Wheat account for over 99 percent of volume.

According to AMS, in the second quarter of 2022, year-to-year transportation costs of shipping grain to Mexico via both land and sea routes rose due to an overall rise in truck, barge and ocean freight rates. Rail transportation costs were also up 9 percent year-to-year.¹ Through Jan-Oct 2022, soybean export volume is up 26 percent, and coarse grains (primarily sorghum) while a much smaller class, are also up 97 percent year-to-date. Corn and wheat export volumes in this period are down 6 and 4 percent respectively but bearing in mind that both corn and wheat exports reached record levels in 2021, volumes remain strong.

To summarize southbound movements of U.S. bulk grains and oilseeds to Mexico, the equation differs from U.S. global exports due to the land border. Most bulk exports move via rail through major POEs in Texas, followed by Gulf seaports, and a minimal amount via truck. However, across bulk commodities, there are some notable variations. The following charts show major bulk exports from Jan-Oct 2022, broken out by Customs District and Mode of Transport.

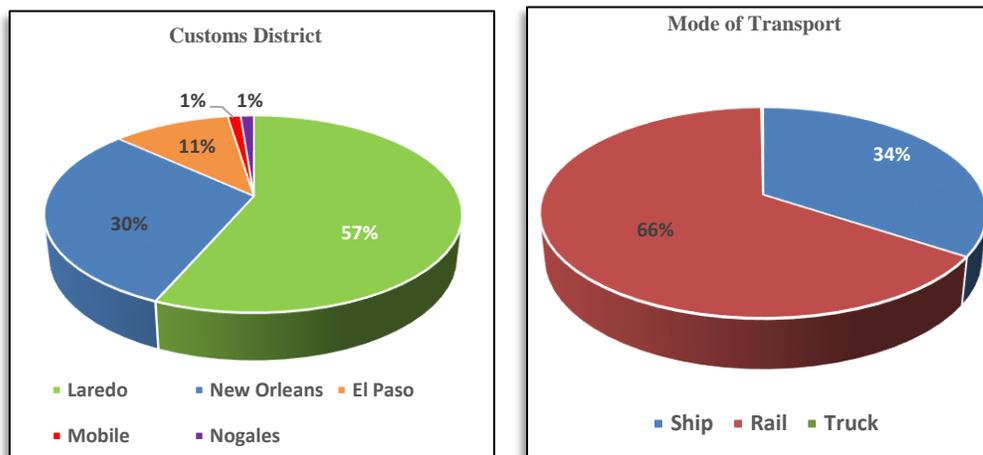
Figure 2: U.S. Grain/Oilseed Exports to Mexico by Customs District & Mode of Transport, 2022 YTD

2a. Corn (12.98 MMT)

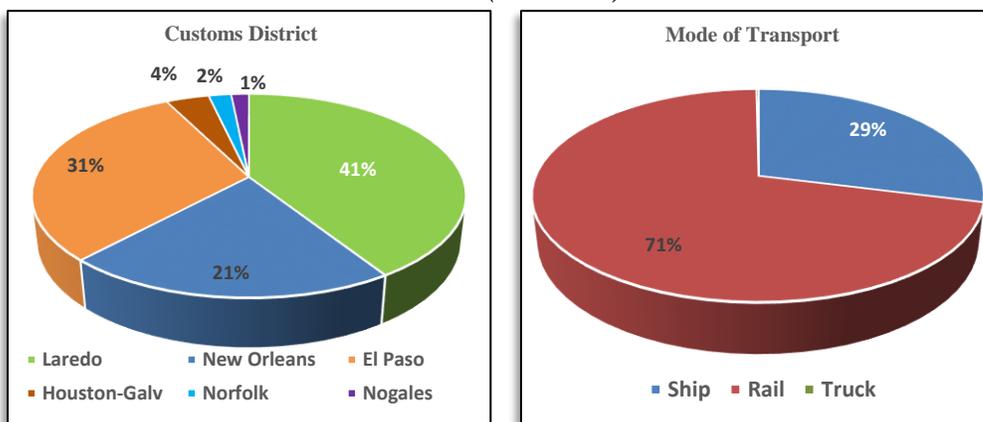


¹ USDA AMS. [Mexico Transport Cost Indicator Report, 2nd Quarter 2022](#).

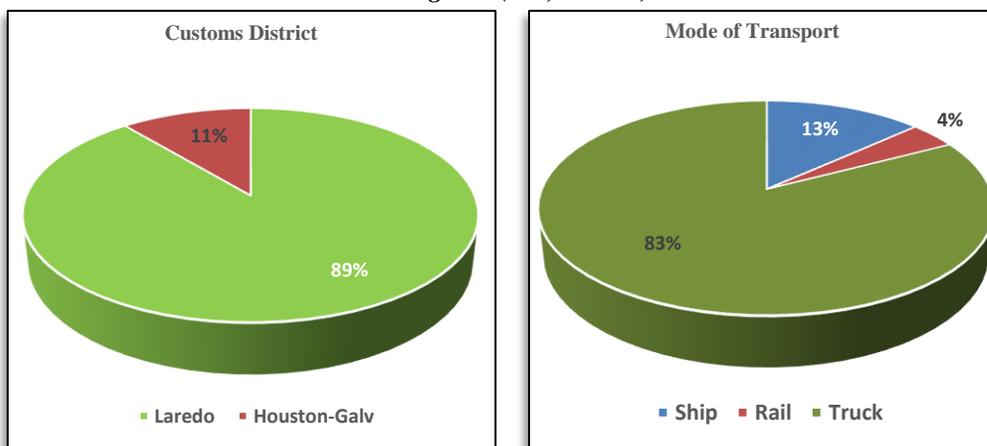
2b. Soybeans (4.84 MMT)



2c. Wheat (3.53 MMT)



2d. Sorghum (326,409 MT)



Source: Global Agricultural Trade System, Federal Grain Inspection Service

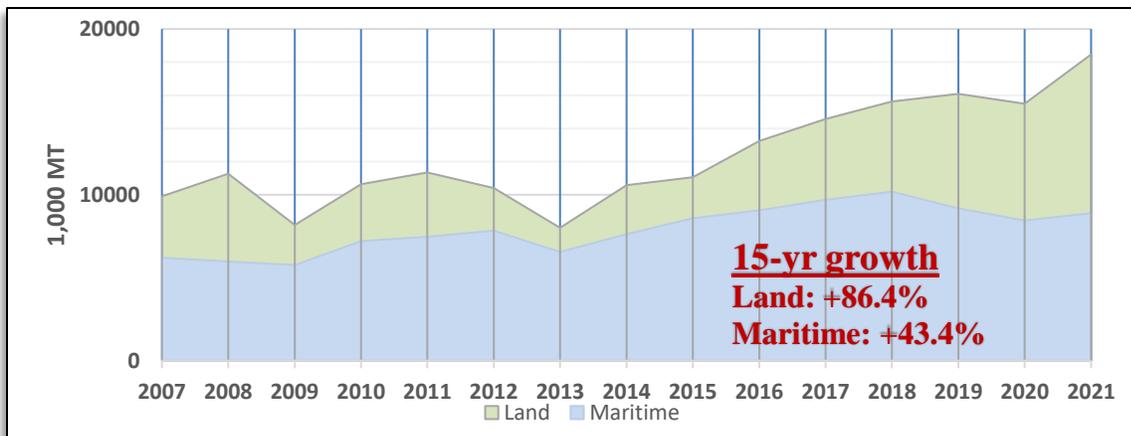
This report utilizes both U.S. Census trade data (Customs District) and Federal Grain Inspection Service (FGIS) grain inspections data (Mode of Transport). While the above FGIS data does not include 100 percent of grain shipments, it is still a useful proxy particularly for grain export data to Mexico. The USDA AMS [Weekly Grain Transport Report for October 27, 2022](#) contains a helpful narrative on using

FGIS inspections data. In terms of U.S. Customs Districts through which this trade occurs, a common theme throughout this report is the importance of POEs within the Laredo district for both southbound and northbound trade. By volume thus far in 2022, the land border overall has handled 65 percent of total U.S. bulk exports to Mexico. The Laredo district has handled 72 percent of that volume, or 47 percent of total U.S. bulk exports to Mexico. As indicated above, freight truck is not a viable method of transportation for most U.S. bulk exports to Mexico. Occasional small local shipments of grain (corn) employ freight truck to cross the border. Beyond corn, a larger proportion (albeit much smaller total volume) of coarse grain exports such as sorghum are exported via truck, primarily through Texas ports.

With some exceptions (wheat from Norfolk, occasional grain shipments from Houston and Mobile), bulk exports shipped via maritime channels are handled through the New Orleans customs district. This aligns with the central role of that region for U.S. bulk exports throughout the world. Along the land border, rail connections through Laredo and El Paso then handle most bulk trade. While corn, soybeans and wheat trade all rely on rail connections to move most volume to Mexico, in recent years wheat especially has become increasingly exported via rail, with an estimated 71 percent of all wheat inspected for export to Mexico shipped via rail in 2021.

Overall volume of bulk exports to Mexico via ship has decreased by 13.6 percent since 2018. While the U.S. East Coast and Gulf districts such as Houston-Galveston and Mobile are handling less volume to Mexico in recent years, this is not necessarily a case of less volume transiting through the Gulf of Mexico. These exports through the New Orleans district have varied over this same period, and in 2022 are up from the previous year. Looking at this trend over a longer period, the narrative is not one of rail volume increasing at the expense of maritime volume. Bulk exports by rail to Mexico did grow faster than maritime over the last fifteen years; at twice the rate as those exported via maritime channels, in fact. Yet overall, both avenues of trade have experienced significant growth as the bilateral trade relationship has expanded.

Figure 3: Volume of U.S. Bulk Exports to Mexico by Land/Maritime Channels, 2007-2021

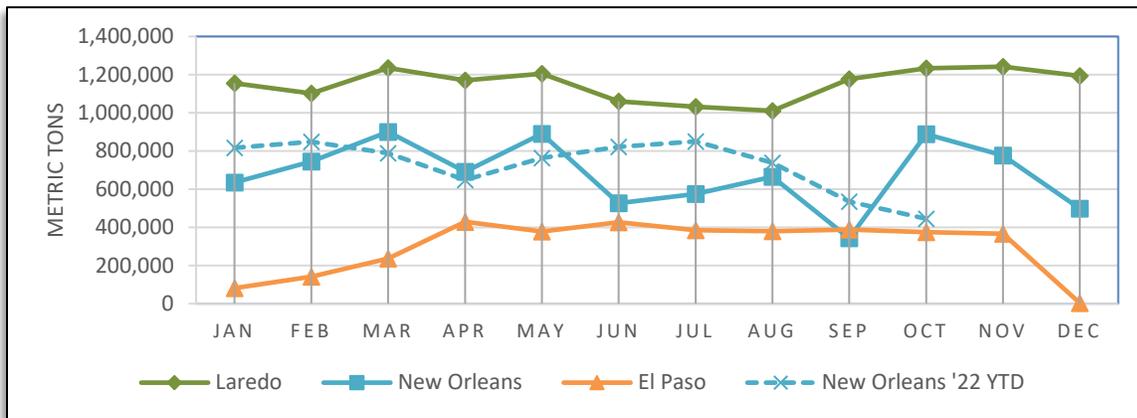


Source: Global Agricultural Trade System *Note: Rail accounts for over 99 percent of “land”*

The increasing proportion of bulk grain and oilseed exports to Mexico using rail is a longer-term trend as indicated above. However, low water levels on the Mississippi River in 2022, which is a vital route to export grains and oilseeds through the Gulf of Mexico, creates a situation in which bulk exports to

Mexico could be expected to trend more towards rail or other maritime channels such as the Great Lakes.

Figure 4: Total Monthly Volume of Bulk Exports to Mexico by Customs District



Source: Global Agricultural Trade System

Currently, available data in 2022 shows year-to-year volume of U.S. bulk exports to Mexico through the New Orleans district up by 6 percent. The pace of bulk exports to Mexico through this district were robust through September 2022, when concerns began to escalate on the ability of barge traffic to navigate the river. Monthly export data provides an early indication that volumes to Mexico through the Gulf are affected, with year-to-year volume in the month of October down by 442,317 MT, or 49.8 percent. Volumes through Laredo and El Paso in October 2022 are also down slightly, indicating that this issue in maritime trade has not yet had a corresponding impact in the form of higher rail volumes. Data for November/December 2022 and in the months to follow may indicate whether this translates to higher volumes of grain exports via rail, or delayed exports of grain through the Gulf of Mexico.

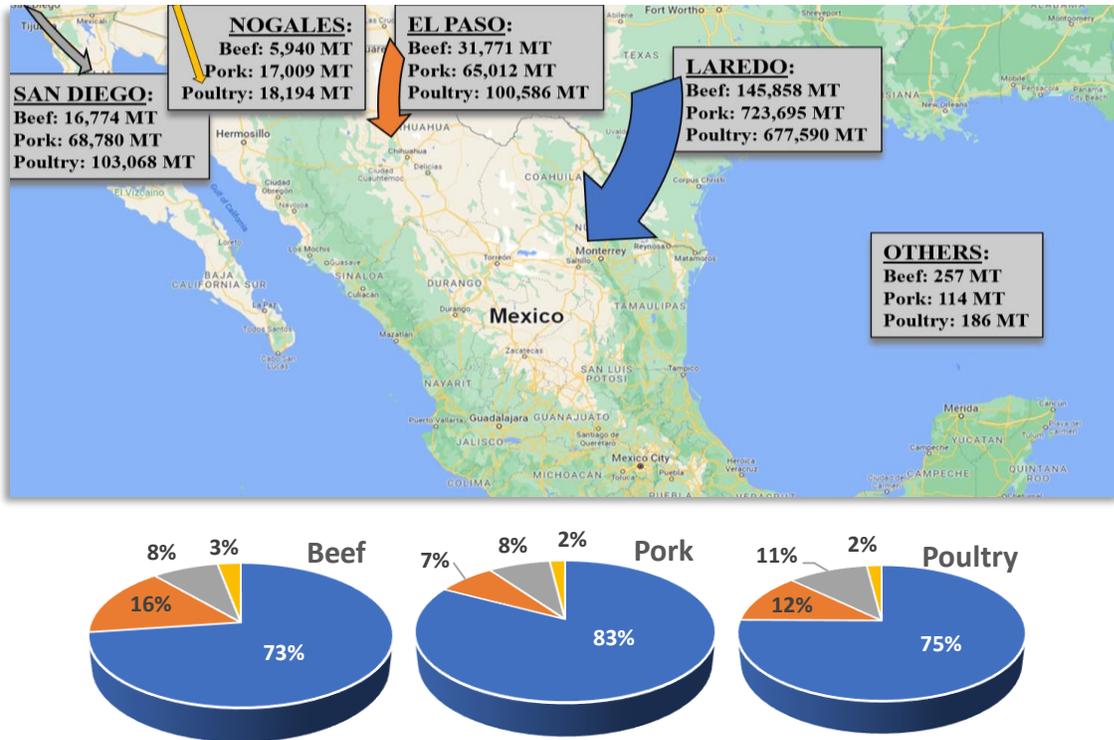
Compared to fresh/perishable exports, U.S. grain exports to Mexico show less seasonality, but there are some seasonal shifts by district and commodity. In 2021, corn exports to Mexico peaked in May at 1.4 million metric tons (MMT). Corn exports through Laredo, which remain at or above 500,000 MT throughout the year, were most elevated from May to December. El Paso, albeit at lower volumes, also experienced elevated trade in that period. Corn exports through New Orleans were most elevated March to May, peaking at 570,000 MT in April. 2021 soybean exports to Mexico peaked in October at 528,000 MT, but otherwise were steady throughout the year between 338,000 and 432,000 MT. Coarse grain exports were most brisk through late and early months, peaking in El Paso in November and in Laredo in January at 16,000 and 40,000 MT respectively. Reference Appendix B to see monthly volume of U.S. bulk exports by commodity and location.

B. U.S. MEAT AND POULTRY EXPORTS

While understanding mode of transportation in animal protein is less relevant, in that nearly all trade in these commodities occurs via truck, there are notable features of where and when this trade occurs along the U.S.-Mexico border. The map and charts below show U.S. exports of beef, pork, and poultry through U.S. Customs Districts. Districts are ranked in terms of volume exported to Mexico in 2021. At the national level, seasonality does not come into play with beef, pork, and poultry exports to Mexico. However, some subproducts such as turkeys unsurprisingly peak later in the calendar year to satisfy increased demand during the holiday season. In 2021, 78 percent of whole turkey exports to Mexico

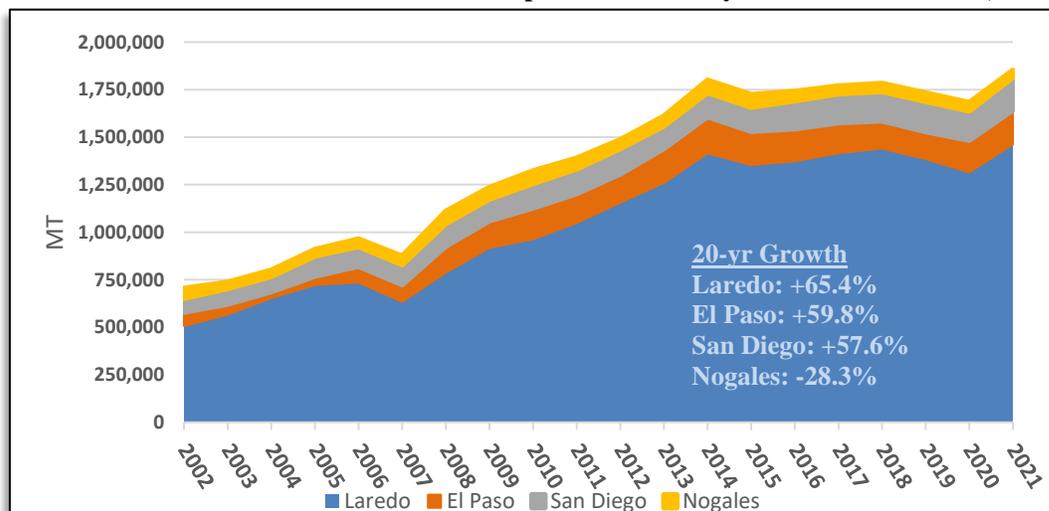
occurred between Oct-Dec, with 83 percent transiting through Laredo and 14 percent through San Diego districts. In 2022, as prices for turkeys rose and production lagged due to avian influenza outbreaks, turkey exports to Mexico were significantly slower in the month of October, down by over 60 percent.

Map 1: Southbound Animal Protein Trade, 2021 Volume



Source: Global Agricultural Trade System

Figure 5: Total Volume of U.S. Animal Protein Exports to Mexico by U.S. Customs District, 20 Years



Source: Global Agricultural Trade System

While growth has been significant, the distribution by POE of trade in animal protein has remained relatively unchanged for the past 20 years, with most volume funneled through the Laredo district. One

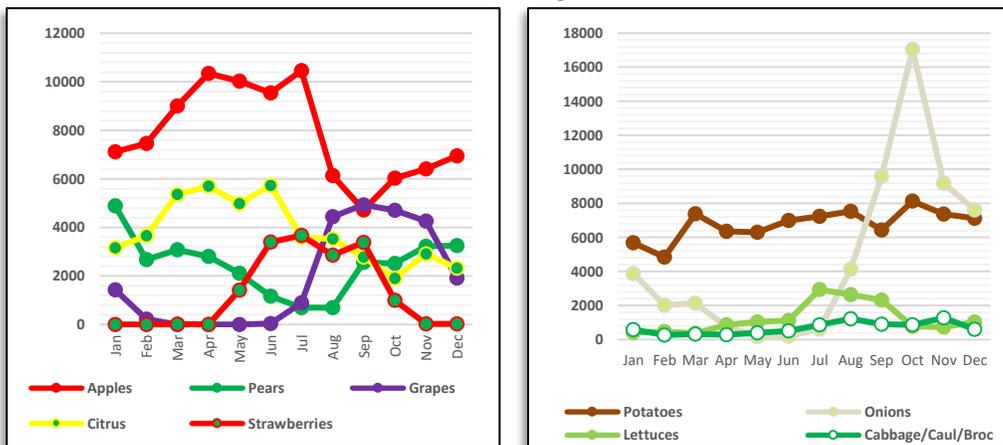
exception to this eastbound orientation is in the export of U.S. dairy products, in which 52.8 percent of volume, mainly of non-fat dried milk (NFDM), is exported through El Paso to Mexico, with 29.9 percent transiting through Laredo. Availability of data on Mexican imports of U.S. dairy broken out by mode of transport is currently only available through 2018, but like other animal proteins, the distribution of this trade across different modes of transport has been relatively stable in recent years. For Mexico’s 2018 exports of this product, 20.5 percent was exported by rail, 1.5 percent by ship, and the remaining 78 percent by truck. As NFDM exports to Mexico continue to grow, freight truck is largely capturing that new growth. From 2009-2018, volume growth by truck grew 315 percent, compared to 4 percent growth for rail. ²

C. U.S. FRESH FRUIT AND VEGETABLE EXPORTS

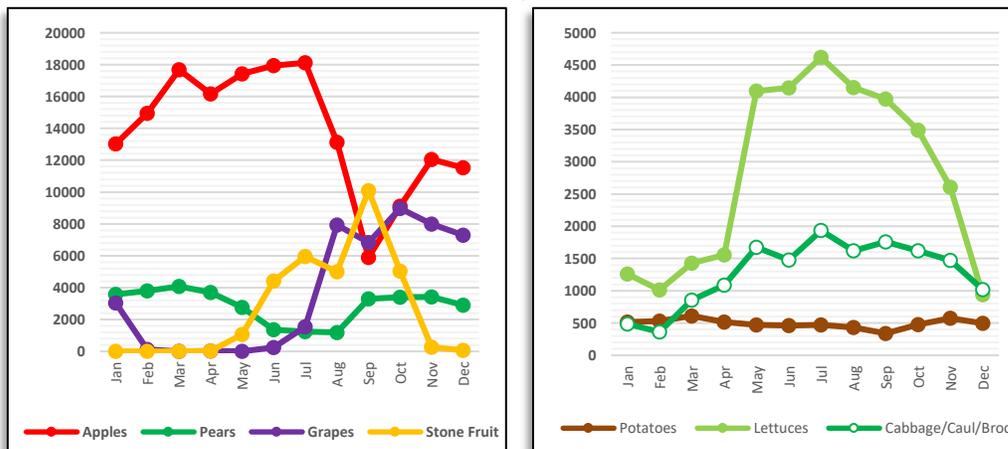
Like animal protein trade, U.S. exports of fresh fruits and vegetables rely upon cross border trucking. Whereas animal proteins are most heavily traded through Texas POEs, fresh fruit and vegetable exports are more oriented towards the western POEs within San Diego and Nogales. This is due at least in part to the geography of exportable supply and/or primary production zones in the United States.

Figure 6: Monthly U.S. Fresh Fruit and Vegetable Exports to Mexico by U.S. Customs District, 2021 (MT)

6a. San Diego

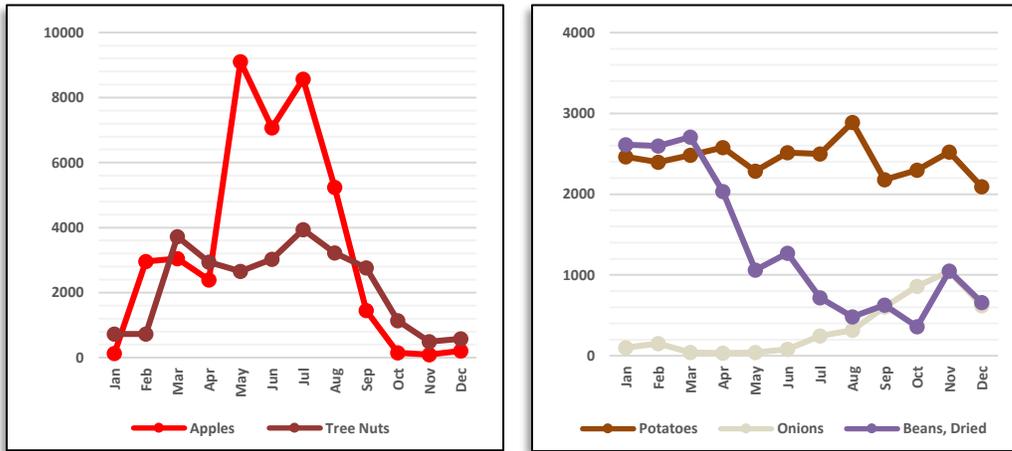


6b. Nogales

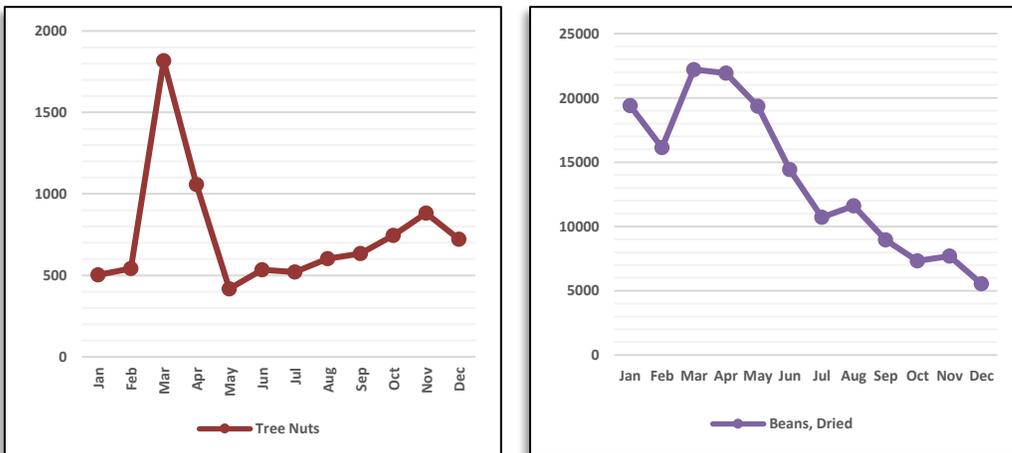


² Trade Data Monitor (TDM), LLC

6c. El Paso



6d. Laredo



Source: Global Agricultural Trade System

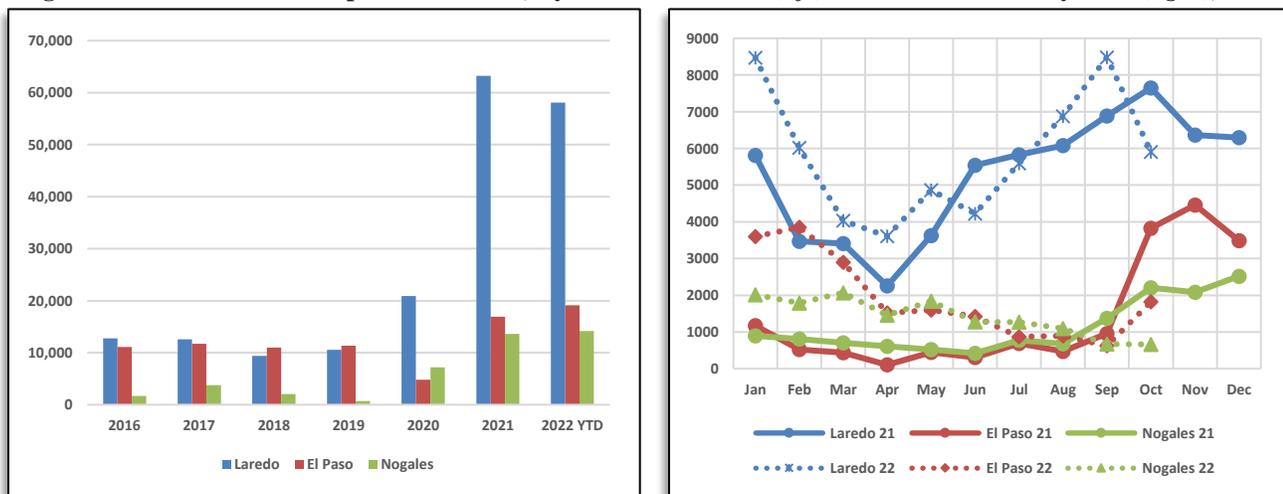
In volume terms, San Diego and Nogales districts are most key to U.S. fruit and vegetable exports. Total volume of trade through San Diego peaked in June 2021, driven primarily by apples but also citrus and strawberries. Grape exports also pick up through August to December. Monthly pace in 2022 has followed a similar path, peaking in June and remaining strong through October. Total southbound volumes through Nogales peak slightly later in the year, driven by apples, stone fruit, and various green vegetables. Much like San Diego, grape trade was also brisk in the last quarter of the calendar year. Thus far in 2022, volume through Nogales peaked in September due to exports of grapes, apples, stone fruit, various lettuces, dates and melons. Volume in El Paso is primarily driven by apples midyear, as well as potatoes, tree nuts, and dried beans. While Laredo is less central to the southbound trade of fresh fruit and vegetables, it is the primary conduit for U.S. exports of frozen fruit and vegetables to Mexico. El Paso and Laredo are also the primary points of export under the 0713 HS Heading of *Dried Leguminous Vegetables* and HS Heading 0802 *Nuts except Coconut*. Kidney beans, black beans, and lentils account for most trade under HS 0713, while pecans and walnuts account for most trade occurring under HS 0802.

D. OTHER FOOD/AG PRODUCT EXPORTS

In terms of intermediate products, DDGS, soybean meal, malts, flours, sweeteners, corn starch, animal fats, hides/skins, planting seeds and live animals are traded extensively with Mexico. Much like bulk grains and animal proteins, trade is skewed heavily towards the Laredo district. Some exceptions exist, particularly with regards to animal fats which are increasingly relying on rail transport through the El Paso district in recent years. Approximately over 90 percent of soybean meal, three-quarters of DDGS, and over two-thirds of other feeds & fodders transit via rail. Over three-quarters of sweeteners and nearly all malt also transits into Mexico via rail. The charts in Appendix B show the distribution of these exports by the various POEs.

While these exports of intermediate products are relatively stable in mode of transport and pathway to export, the southbound export of live animals is an area that shifted significantly in recent years. Albeit in much smaller volumes than Mexican exports of live cattle to the United States (see Section II), U.S. exports of live cattle to Mexico began to spike in 2020 due to several factors. As reported in the [2022 Mexico Livestock and Products Annual](#), U.S. cattle exports for immediate slaughter in Mexico have increased significantly due in part to strong U.S. cattle production, but also to the closing and understaffing of U.S. facilities during the pandemic. This trend intensified in 2021, with live cattle exports experiencing a nearly threefold increase. Exports of live cattle through the Nogales and El Paso POEs follow a predictable seasonal pattern with numbers dropping during the hotter months of the year. Exports through Laredo show less seasonality, which is where most of this growth over the past two years has occurred. According to industry, available infrastructure and staffing of inspectors are primary drivers for Laredo’s key role in this increased trade. This elevated southbound trade in cattle has persisted throughout 2022.

Figure 7: U.S. Live Cattle Exports to Mexico, By Customs District (left) and 2021-22 Monthly Pace (right), MT



Source: Global Agricultural Trade System

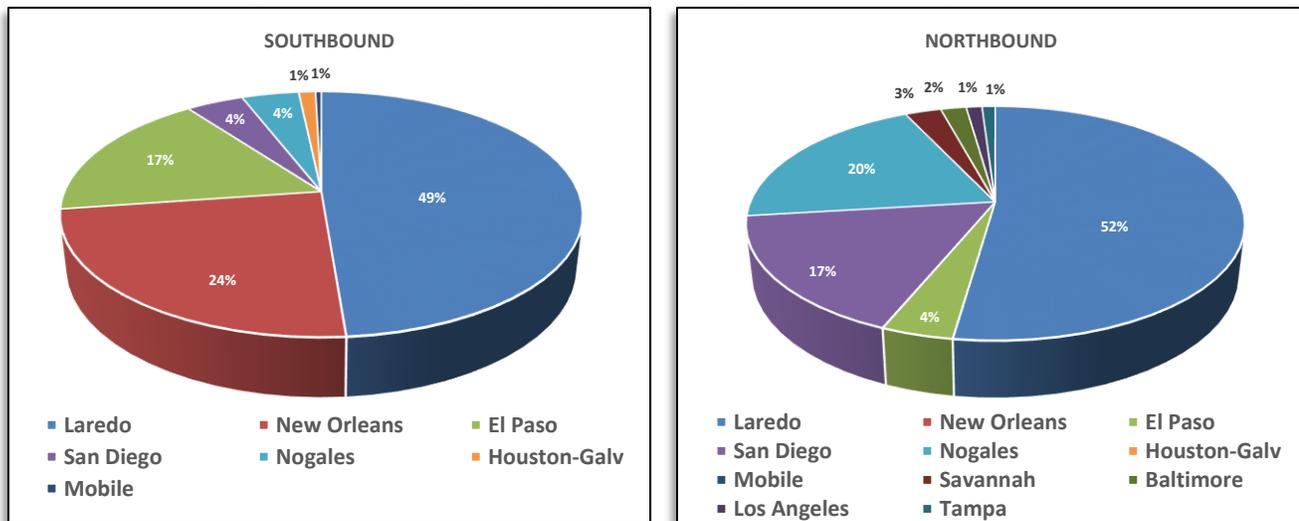
In 2021 and 2022, U.S. southbound agricultural trade to Mexico has been characterized by record values due in part to the current high price environment for food and agricultural products, but also by consistently high volumes. Southbound trade relies heavily on commercial crossings in the Laredo district, and rail has become an ever more vital mode of transport particularly for bulk and some

intermediate products. Exports to Mexico via maritime channels has also grown, but at a more moderate pace than the growing volumes on rail.

SECTION II: NORTHBOUND AGRICULTURAL TRADE

Based on the comparison below, Mexican ag exports to the United States are slightly more reliant on commercial crossings along the eastern side of the U.S.-Mexico border, and over 90 percent utilizes land crossings. The volume of Mexican ag exports is notably lower than U.S. exports to Mexico, due to greater proportions of high-value, consumer-oriented products.

Figure 8: Bilateral Ag Trade, Total Volume by Customs District, 2022 YTD



Source: Global Agricultural Trade System

The value of Mexico’s 2021 exports to the United States of \$39.5 billion exceed that of 2021 U.S. exports to Mexico by \$13.0 billion. Due to the nature of these products, Mexico’s agricultural exports to the United States are also more heavily oriented towards truck transport. In 2022 YTD (Jan-Sep), after reaching record levels in 2021, total volume of Mexican agricultural exports to the United States are up by another 6 percent from the same period in 2021.

While commercial crossings in the Laredo district continue to handle the largest single share of Mexican agricultural exports to the United States (51 percent of volume year-to-date, MT basis), the San Diego district experienced the most significant year-to-year uptick in trade by volume (+11 %), driven primarily by distilled spirits (+43%) and fresh berries (+33%). Mexican exports through Laredo are up 5% on the year, also due primarily to distilled spirits (+38%), fresh vegetables (+6%), beer (+8%), baked goods (+15%), and fresh berries (+77%).

Mexican exports make far less use of maritime channels, though some bulk and finished products are traded through other Gulf and east/west coast seaports. For example, bulk sugar is exported largely to Savannah and Baltimore ports, and Tampa handles not insignificant quantities of distilled spirits and fresh fruit/vegetables. Likewise on the west coast, the Port of Los Angeles handles primarily distilled spirits and bananas from Mexico.

A. U.S. BULK IMPORTS

Mexico’s bulk exports to the United States represent a small category in the broader trade relationship. As noted above, they consist primarily of sugar, which accounts for over 80 percent of bulk volume and over 50 percent of bulk value. In 2021, in descending order, an estimated 93 percent of those imports were shipped through Savannah, Baltimore, San Diego, San Francisco and New York districts.

The remainder of U.S. bulk imports from Mexico consist of coffee and pulses. Of the roughly 59,000 MT of unroasted coffee shipped in 2021, Laredo was the first and only land border entry point handling 21 percent of volume primarily by truck, with all other shipments via maritime channels to New Orleans, New York, San Francisco, and a handful of other U.S. ports. Finally, a small but consistent trade in pulses from Mexico to the United States runs by truck primarily through the Nogales POE (60 percent of volume).

B. U.S. MEAT AND POULTRY IMPORTS

U.S. imports of animal protein from Mexico consist primarily of beef through the Laredo district. There is also a smaller trade in pork. Northbound poultry trade is minimal and consists primarily of prepared products, with small amounts of fresh/frozen trade. In addition to consumer-ready animal protein products, Mexico continues to be a major exporter of live cattle to the United States, with over 1 million animals exported in 2021. Commercial crossings across the border handle cattle exports to the United States, but in general those in Chihuahua (Juarez, Ojinaga), Coahuila (Piedras Negras), Nuevo Leon (Colombia), and Sonora (Nogales, Agua Prieta) are the primary routes for northbound animal exports.

Map 2: Northbound Animal Protein Trade, 2021 Volume



Source: Global Agricultural Trade System

C. U.S. FRESH FRUIT AND VEGETABLE IMPORTS

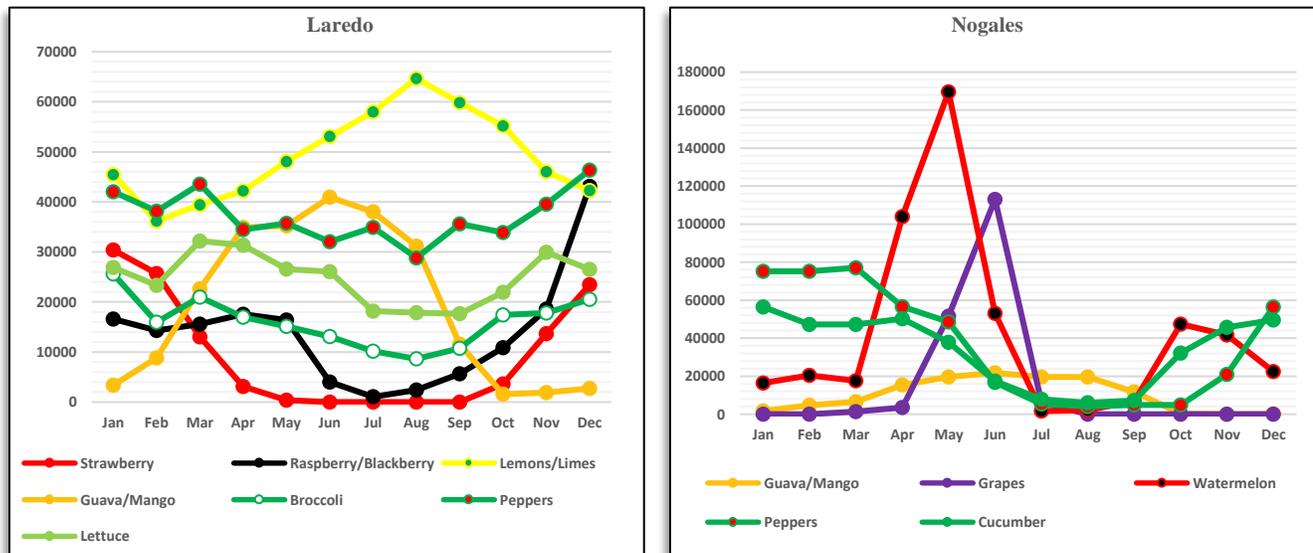
In value terms, Mexico’s exports of fresh fruits and vegetables are a key part of the country’s trade with the United States. Much like fresh produce southbound from the United States, currently Mexico’s exports of fresh fruits and vegetables are shipped almost exclusively by truck. Though unlike U.S. exports of the same category that flow primarily through more western points along the land border,

northbound shipments are more heavily oriented towards eastern commercial crossings. Some exceptions exist for products whose production zones in Mexico are in closer proximity to the Nogales/San Diego commercial crossings such as table grapes and watermelon. However, existing infrastructure, inspection capacity, and more direct access to the largest U.S. markets dictate more eastbound trade flows.

Avocados from Mexico, of which the United States imported over 1 MMT in 2021, with very small exceptions are shipped through the Laredo district. Fresh tomatoes represent another product that is shipped at volume through the Laredo district throughout the year (especially through the McAllen POE). However, there are also seasonal increases through Nogales in the first half of the year with a less pronounced increase through San Diego mid to late year. Excluding avocados, about 38 percent of Mexico’s fresh fruit and vegetable exports flow through Laredo crossings, 30 percent through Nogales, and 17 percent through San Diego. A notable feature of Mexican fresh fruit and vegetable trade through the Laredo district is the extent to which certain products flow through certain POEs. For example, a large majority of fresh fruit and vegetables transit through the Reynosa/McAllen POE as opposed to the Laredo/Colombia POEs.

Similar to Section I-C of this report, the charts below present the 2021 monthly pace of Mexico’s fresh fruit and vegetable exports to the United States, broken out by the Laredo and Nogales districts, looking at the most high-value categories for each location. Given the immense variety of Mexico’s fresh exports, Laredo and Nogales are separated below.

Figure 9: Monthly Volumes of U.S. Fresh Fruit and Vegetables Imports from Mexico by U.S. Customs District, 2021 (MT)



Source: Global Agricultural Trade System

Northbound volume of non-avocado fresh produce through Laredo in 2021 peaked in July, driven by apples, stone fruit, and various green vegetables. Much like San Diego, grape trade was also brisk in the last quarter of the calendar year. Based on the geography of production zones for several fresh products in Mexico, the Nogales POE is also a seasonally important conduit particularly of table grapes,

watermelon, and several vegetable varieties. 2021 volume of trade in fresh produce through Nogales peaked in April to June, driven by the watermelon and table grape harvests.

In 2021 and 2022, northbound agricultural trade from Mexico to the United States has been characterized by record values due in part due to the current high price environment for food and agricultural products. Strong consumer demand in the United States continues to contribute to record volumes of food and agricultural imports. Much like southbound trade, Mexican exports by land rely heavily on commercial crossings in the Laredo district with the freight trucking network as the primary manner by which those products are sent to market.

SECTION III: OVERVIEW OF U.S-MX COMMERCIAL CROSSINGS

A. LAND CROSSINGS

At the time of this report there are twenty-nine commercial crossings or POEs along the U.S.–Mexico border, including rail crossings. Nine of these crossings can be considered major POEs through which the largest volumes of agricultural products are shipped into Mexico and vice versa. Agricultural products imported into Mexico must comply with regulations under Mexico's Secretariat of Agriculture and Rural Development (SADER). Inspectors from SADER's National Service of Health, Food Safety, and Food Quality (SENASICA) perform product inspection at approved, privately-owned inspection facilities known as Verification and Inspection Points (VIPs). These can be located on either side of the border and vary by POE. Fresh fruits and vegetables, propagating material, cotton, and grains (not transported by rail) are normally inspected on the U.S. side of the border but can also be inspected at approved sites in Mexico. Animal products and animal by-products are inspected on the Mexican side of the border. The following commercial ports of entry (from east to west) handled the majority of U.S. agricultural export volume by land:

1. MATAMOROS, TAMAULIPAS

There are currently five VIPs here authorized by SENASICA. One is located in Brownsville, Texas for livestock inspection. The other four are located in Mexico. Three of these are for animal and plant products. The fourth is the Matamoros Rail Station used for grain inspection.

Product is transported by truck and rail. Commercial vehicles crossing from Brownsville pass through the Veterans International Bridge at Los Tomates and into Mexico through the Puente Internacional Tomates. Commercial trucks also cross from Brownsville through Los Indios International Bridge. Rail crosses through the West Rail Bypass International Bridge and into Mexico through the Puente Ferroviario Matamoros-Brownsville. Rail service is provided by Kansas City Southern de México (KCSM).

2. REYNOSA, TAMAULIPAS

There are currently nine VIPs here authorized by SENASICA. In Hidalgo, Texas, there are two inspection points for plant and plant products and used agricultural machinery. In Mexico, there are seven VIPs for animal and plant products. It is important to note that the Hidalgo-Mission area possesses extensive cold storage facilities providing service for north and southbound trade.

Product is transported by commercial truck, crossing at the Pharr-Reynosa International Bridge or the Progreso-Nuevo Progreso International Bridge. Since 2018, commercial transport has been able to cross

through the Anzalduas International Bridge that connects Mission, Texas with Reynosa. This bridge was previously open only for non-commercial vehicles.

In recent years, Reynosa/McAllen displaced Nogales as the principal POE for fruits and vegetables. This is in part attributed to Mexico's developing highway infrastructure, in particular the Puente Baluarte, a state-of-the-art bridge inaugurated in January 2012, and a key component of the highway that connects Sinaloa producing regions with Durango and points north/northeast.

3. NUEVO LAREDO, TAMAULIPAS

In terms of sheer volume, the commercial crossings at Nuevo Laredo and Colombia (below) are some of the busiest along the U.S.-Mexico border. At the Nuevo Laredo crossing, there are six VIPs authorized by SENASICA. Two are located on the U.S. side of the border in Laredo, TX. One is for plant and plant products while the second is TDA's livestock pens. Four VIPs are located on the Mexican side of the border, with three used to inspect both animal and plant products. The fourth is located at the KCSM railyard station known as "Estación Sánchez" used for the inspection of grains, DDGS, meals, and oilseeds.

At this POE, U.S. product is transported by truck and rail. Commercial trucks cross at the World Trade International Bridge and enter Mexico through the Puente Internacional III in Nuevo Laredo, Tamaulipas. Product transported by rail crosses through the International Rail Bridge and into Mexico through the Puente del Ferrocarril in Nuevo Laredo. Rail service is provided by KCSM.

4. COLOMBIA, NUEVO LEÓN

This POE, while in Nuevo León, is in close proximity to the Nuevo Laredo-Laredo area. There are five VIPs authorized by SENASICA. All five are located on the Mexican side of the border (within the fiscal trade zone at the Colombia POE) for both animal and plant products. All products exported through Colombia are transported by truck. Commercial vehicles cross from Laredo, Texas through the Colombia Solidarity International Bridge and into Nuevo Leon.

5. PIEDRAS NEGRAS, COAHUILA

There are two VIPs on the Mexican side of the border authorized by SENASICA. One is for animal and plant products plus used agricultural machinery. The second is the Ferrocarril Mexicano (Ferromex) rail yard station in Rio Escondido for the inspection of dry plant and animal products. Product is transported through Piedras Negras by truck and rail. Southbound commercial vehicles cross from Eagle Pass at the Camino Real International Bridge and into Mexico through the Puente Internacional Piedras Negras-Eagle Pass. Product transported by rail crosses at the Charles Frisby International Railroad Bridge. Union Pacific and Ferromex provide rail service at this POE.

6. CIUDAD JUAREZ, CHIHUAHUA

There are eight VIPs here authorized by SENASICA. Four are located on the U.S. side of the border. Two of those are for plant products and used agricultural machinery. The other two are for livestock inspection. In Mexico, there are three for animal and plant products. The fourth VIP on the Mexican side is Ferromex's Estación Meseta railyard, where rail inspections are performed by SENASICA. Livestock exported to Mexico is inspected on the U.S. side of the border at the Chihuahua Cattlemen Association pens in Santa Teresa, New Mexico and at the TDA export pens in El Paso, Texas.

Product is transported by both truck and rail through the commercial crossings in this area. The majority of truck traffic crosses from El Paso into Ciudad Juarez through two commercial bridges: Ysleta International Bridge and the El Paso-Bridge of the Americas (BOTA). In lesser amounts, commercial trucks cross into Chihuahua through the following commercial crossings in Texas and New Mexico: Santa Teresa-San Jeronimo, Tornillo-Guadalupe, Columbus-Puerto Palomas, and Presidio-Ojinaga. Product transported by rail crosses from El Paso through the International Rail Bridge Crossing and into Ciudad Juarez through the Puente de Ferrocarril-Ciudad Juarez known as Puente Negro. Burlington Northern Santa Fe and Ferromex manage rail service at this POE.

7. NOGALES, SONORA

There are seven VIPs here authorized by SENASICA. Three are located on the U.S. side of the border. Two of these are for plant products and used agricultural machinery. The third is for live animal inspection. In Mexico, there are four VIPs for animal and plant products. Products such as grains and meals cross by rail from Nogales, Arizona and are inspected on the Mexican side of the border at the Ferromex railyard. Hogs for reproduction, horses, and cattle are inspected in Nogales, Arizona at a privately-owned facility.

Product is transported primarily by truck and shipments by rail are scarce at this POE. Commercial vehicles cross from Nogales, Arizona through the Mariposa International Bridge. Product transported by rail crosses through the Dennis DeConcini Port of Entry and into Mexico through the Cruce de Ferrocarril Garita del Centro. Union Pacific and Ferromex provide rail service at this POE. A secondary POE for agricultural products crossing from Arizona to Sonora is the San Luis, AZ-San Luis Rio Colorado II commercial crossing. Other commercial crossings in the Nogales-Sonora border area are the POEs of Lukeville-Sonoyta and Douglas-Aguaprieta.

8. MEXICALI, BAJA CALIFORNIA

There are six VIPs here approved by SENASICA. Two are located on the U.S. side in Calexico, California for plant products and agricultural machinery. Four are located in Mexico. Three are for animal and plant products. The fourth is the Ferromex rail yard authorized for grains, and dry plant and animal products.

Product is transported by truck and rail. Commercial vehicles crossing from Calexico use the West Calexico Port of Entry and cross into Mexico through the Puente Internacional Puerto Nuevo. Product transported by rail crosses through Calexico into Mexicali through the East-Calexico Rail Crossing. Union Pacific Railroad and Ferromex provide rail service at this port of entry.

9. TIJUANA, BAJA CALIFORNIA

There are eight VIPs here approved by SENASICA. Three are located on the U.S. side in San Diego County for plant products. In Mexico, there are five VIPs. Three are authorized for the inspection of animal and plant products. Also, on the Mexican side of the border SENASICA inspects grains, feed additives, and other agricultural products such as animal fat transported by rail at a railyard facility known as "Estación García". Products are principally transported by truck through these POEs. Commercial vehicles crossing from San Diego into Tijuana use the Otay Mesa Bridge. Rail shipments can cross through both San Ysidro and Otay Mesa Bridge.

B. MX SEAPORTS

Mexico's other trading partners (e.g. Brazil, Canada, EU) naturally rely more heavily on maritime POEs in trading with Mexico. However, in terms of volumes imported (ag and non-ag products) through the country's seaports in 2021, U.S. exports still account for nearly three-quarters of that trade. The New Orleans customs district, by far the largest U.S. maritime conduit for agricultural exports to Mexico, and second largest of all U.S. Customs Districts in terms of both volume and value of ag exports to Mexico, experienced a marginal year-to-year increase in 2021 volume of exports with rice and DDGS experiencing the most growth. While the volume of ag trade through land borders has surpassed pre-pandemic levels in 2019 by nearly 12 percent, exports to Mexico through New Orleans are up by a more moderate 4 percent in the same period.

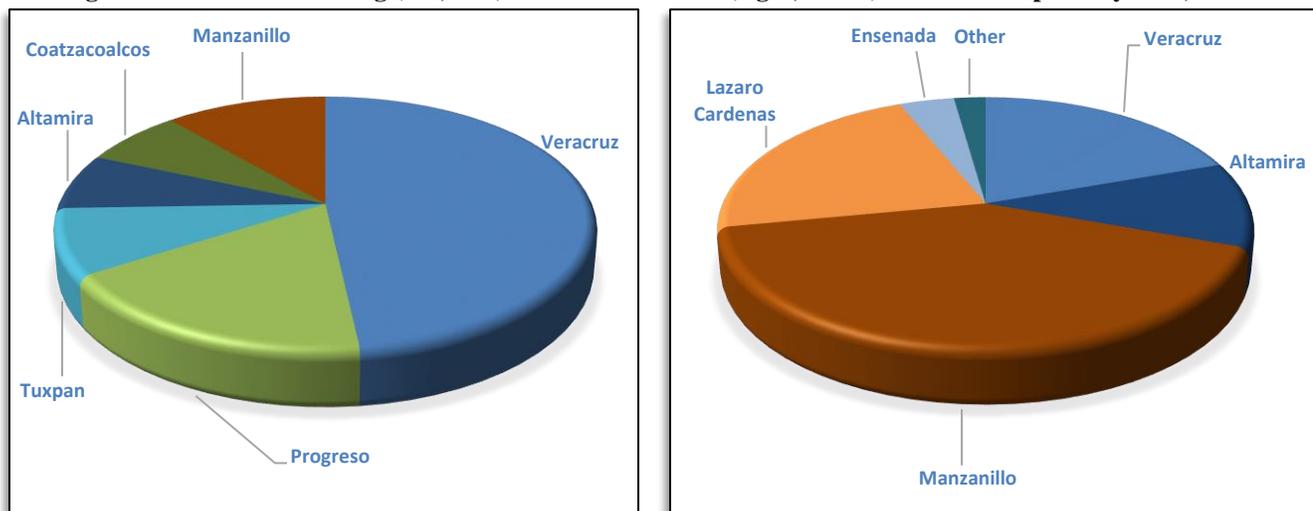
1. GULF SEAPORTS

Of Mexico's nearly 16 MMT of bulk grains imported in 2021 (from all trading partners) via maritime channels, an estimated 82 percent arrived through Gulf seaports according to the country's Naval Secretariat (SEMAR). For U.S. bulk exports to Mexico, the ports of Veracruz, Progreso and Altamira consistently handle the majority of volume, with Veracruz generally the highest volume destination. However, the Gulf/Caribbean ports of Tuxpam and Coatzacoalcos also handle smaller volumes of grains and oilseeds. Altamira and Veracruz are the two largest Gulf seaports in terms of container traffic. Veracruz handled nearly half of Mexico's maritime bulk grain imports, with Progreso (18 percent), Tuxpam (8 percent), Altamira (7 percent), and Coatzacoalcos (7 percent) the other main Gulf ports for bulk grain. Veracruz and Altamira are Mexico's largest Gulf container ports.

2. PACIFIC SEAPORTS

By volume of traffic and cargo handled, Manzanillo is Mexico's largest maritime port. It is less central, though, for U.S. agricultural exports. As shown in the charts below, Mexico's Pacific seaports of Manzanillo and Lazaro Cardenas handle a majority of Mexico's container imports; 42 percent and 22 percent respectively. While most grain is imported through Gulf seaports, Manzanillo also handles a sizeable share of that trade (11 percent). The Pacific ports of Guaymas and Toplobambo are involved in Mexico's grain exports, but did not handle any imports in 2021.

Figure 10: Mexico's Bulk Ag (left, MT) and Containerized (right, TEUs) Maritime Imports by Port, 2021



Source: Mexico's Naval Secretariat (SEMAR)

Mexico possesses numerous other seaports that play a role in its agricultural exports to the world (e.g. Guaymas, Topolobambo). Therefore, the map below should not be considered an exhaustive list of commercial seaports in the country. Instead, in addition to commercial crossings along the U.S.-Mexico border, this shows the country's largest seaports (e.g. Manzanillo) and those of particular importance to the import of U.S. agricultural commodities.

Map 3: Major Mexican Border and Maritime Commercial POEs



SECTION IV: CHALLENGES/OPPORTUNITIES IN U.S.-MEXICO TRADE LOGISTICS

For U.S. exporters, Mexico presents a relatively open and competitive trade environment, due in part to its proximity and wealth of avenues for trade. In addition to being a party to the United States-Mexico-Canada Agreement (USMCA), Mexico currently is a party to a total of 13 Free Trade Agreements (FTAs) with 50 countries. As global supply chains have been stressed over the past several years due to the coronavirus pandemic and the war in Ukraine. U.S.-Mexico bilateral agricultural trade, while not immune to the high transport prices and delays that characterize this period of uncertainty, has perhaps shown more resilience due to the inherent logistical advantages between both countries, and the variety of this trade in terms of commercial crossings and available modes of transportation. Despite these built-in advantages, the evolution of bilateral agricultural trade is not without disruptions and challenges. For example, introduced in 2021, the *Complemento Carta Porte* is an added measure by Mexico's tax authority that applies to all imported/exported goods that transit within Mexican territory. Full enforcement of the measure and its fines/penalties for noncompliance has been delayed several times, most recently until July 31, 2023.

Commercial transportation between both countries is also continually adjusting to shifts in consumer behavior and demand. Industry reported high shipping costs to, from, and within Mexico in 2021 and

2022, which directly impacts the cost paid by consumers. Another feature of cross-border trade during COVID-19 was an increasing imbalance between north and southbound freight shipped via truck, with far more freight heading northbound than southbound. This imbalance is not new and for several years predating COVID, food and agricultural trade via truck was more heavily northbound-oriented. However, the imbalance sharpened in 2020 and 2021. A north-south imbalance that was traditionally 3-to-1 reached as high as 8-to-1 in late 2020.³ Also complicating the commercial truck area of the supply chain are driver shortages on both sides of the border. Most recently the national trucking association in Mexico (CANACAR) estimated that Mexico has a shortage of up to 50,000 truckers.

In early April 2022, the State of Texas instituted additional inspections of commercial vehicles at several commercial crossings with Mexico for approximately a week and a half. This state policy touched off a brief but acute logistical crisis in which northbound commercial trucks experienced extended wait times to cross into the United States. The most immediate impact was felt amongst shippers of northbound fresh and perishable items. However, indicative of the interdependent nature of the cross-border supply chain, these northbound delays began to impact the speed with which short haul or drayage trucks were being turned around at the border, and in some cases southbound cargo began to feel disruptions as well. Protests of this policy on the Mexico side of the border also stopped southbound traffic at various POEs for short durations. At least according to available trade data for the Laredo and El Paso districts (with the caveat that the latter contains several commercial crossings outside of Texas), this brief but sudden slowdown of volume of northbound consumer-oriented trade is not immediately apparent in available trade data. Overall, northbound volumes through Laredo in April 2022 were well above the 5-year average. However, economic studies conducted afterwards estimated industry losses in the hundreds of millions of dollars. The week of December 12, 2022, reports indicated similar inspections taking place at the Bridge of the Americas commercial crossing in El Paso. At time of this publication, reports indicate northbound commercial traffic is being routed through nearby POEs without delays of the magnitude witnessed earlier this year.

A potential yet currently unrealized result of this policy is the consideration of a broader range of locations and modes of transport through which products are traded between the two countries. The T-MEC Corridor is one example: a rail project that remains in the planning phase to link the Mexican Pacific seaport of Mazatlan to points throughout North America as far north as Winnipeg, Canada. Following the April 2022 inspections, the Government of Mexico publicly indicated interest in shifting the route west of Texas to nearby Santa Teresa, New Mexico as an alternative. Currently Santa Teresa handles less freight than other commercial crossings such as those in nearby El Paso. This corridor is also a project being developed by private firms, and so there are various stakeholders that would decide the eventual route of the corridor.

Other 'corridors' seeing interest in further development include the Ports to Plains Corridor and the U.S.-57 Corridor. Beginning in Texas at the Laredo commercial crossings, Port to Plains spans multiple states (Texas, New Mexico, Oklahoma, Colorado), with the objective of upgrading segments of road to interstate-standard highway. Currently under a feasibility study, the U.S.-57 Corridor would connect the Eagle Pass/Piedras Negras commercial crossing with U.S. Interstate 35, south of San Antonio, with an improved four-lane roadway in the U.S. and includes infrastructure improvements south of the POE in Coahuila, Mexico. The state of Nuevo Leon has also invested in modernizing road infrastructure

³ [Journal of Commerce \(JOC\)](#)

between Monterrey (the state capital and largest city in Northern Mexico) and the Colombia POE in anticipation of continued growth in trade volume through this corridor.

Trade along the entire U.S.-Mexico border is projected to grow in the coming years. There are numerous ongoing or planned improvements to existing commercial crossing infrastructure in order to efficiently handle the growing volumes. Most recently this year, the United States and Mexico issued a [joint statement](#) that included information on border modernization, and both countries at the federal level have committed nearly \$5 billion towards those efforts. At various POEs along the land border, there are numerous infrastructure projects (both publicly and privately funded) with implications for commercial traffic capacity. More information of publicly-funded land border modernization projects can be found on the General Services Administration (GSA) website which lists all [current projects](#) under the Bipartisan Infrastructure Law.

SECTION V: CONCLUSION

In value terms, the United States held a 64 percent market share of all agricultural and related exports to Mexico in 2021. Inversely, approximately 81 percent of Mexico's total agricultural exports went to the United States. While obvious in many ways, it deserves emphasizing that while Mexico conducts robust and diverse trade with the world, no competitor can match logistical advantages of the nearly 2,000-mile land border with multiple commercial POEs, and the ability to land bulk products by oceangoing vessel at relatively competitive rates. In 2022 year-to-date, the European Union, Canada, Brazil, and Chile were distant competitors to the United States in their agricultural exports to Mexico.

Bilateral agricultural trade is continually diversifying in terms of product type, mode of transportation, and POE, but the commercial crossings in the Laredo district are currently most central to both southbound and northbound shipments. A combination of historical patterns, existing infrastructure and staffing, and proximity to markets are key drivers. This is not to diminish the importance of other POEs along the land border or major maritime routes, but rather to note the prevailing orientation of agricultural trade volume. The ongoing and planned investment in upgrading infrastructure on both sides of the border also focus heavily on corridors either originating or connecting to this area.

In the past several years, the U.S.-Mexico agricultural trade relationship has continued to grow and diversify, and the magnitude of trade conducted is key to the success of producers and processors on both sides of the border. Amidst continuing supply chain concerns both in North America and around the globe, understanding how, where and when our bilateral trade occurs is as important as ever. This trade has also evolved in that in many products and sectors of our food systems have become increasingly integrated, and efficient cross-border movements are key to our respective food systems. Challenges in a single mode of transportation can quickly have effects along that supply chain and create imbalances and inefficiencies that reverberate well beyond the original point of origin.

APPENDIX A: SUPPLEMENTAL GRAPHS/MAPS – TOTAL TRADE

Figure 11: Total Volume (MT basis) of U.S. Exports to Mexico by U.S. Customs District, 2012-2021

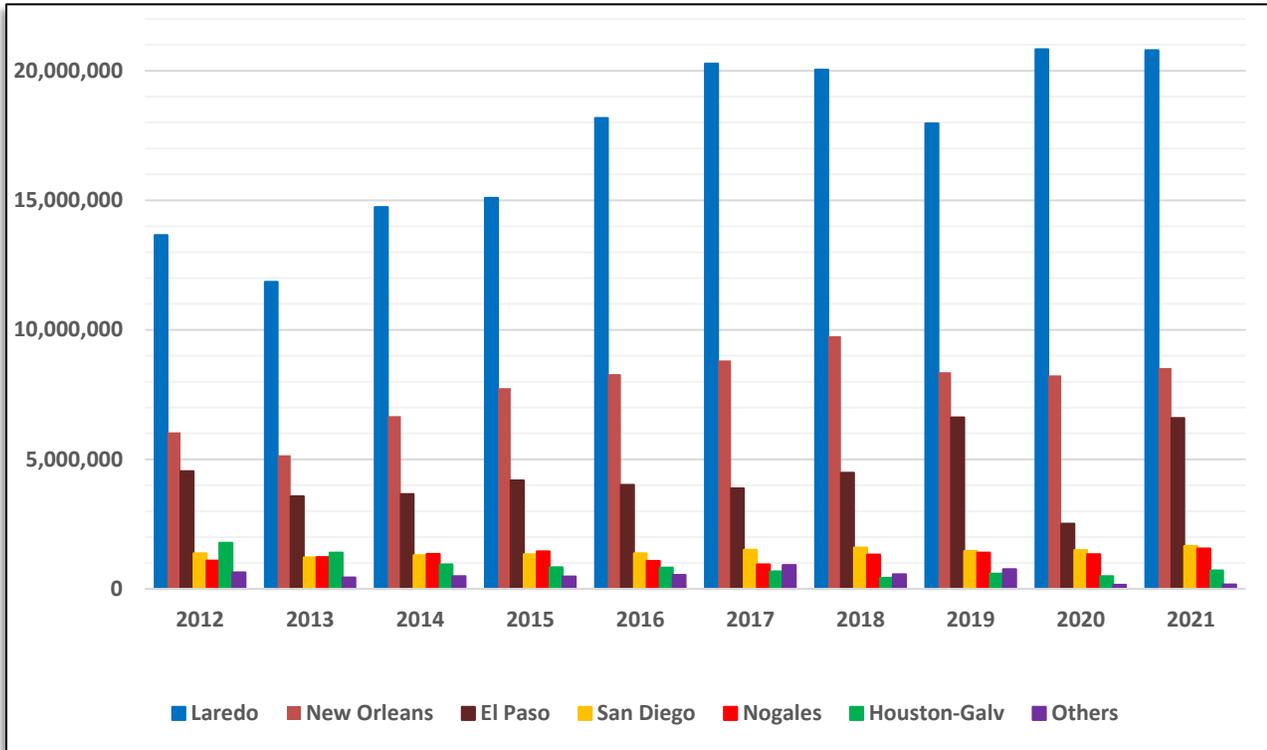


Figure 12: Total Volume (MT basis) of U.S. Imports from Mexico by U.S. Customs District, 2012-2021

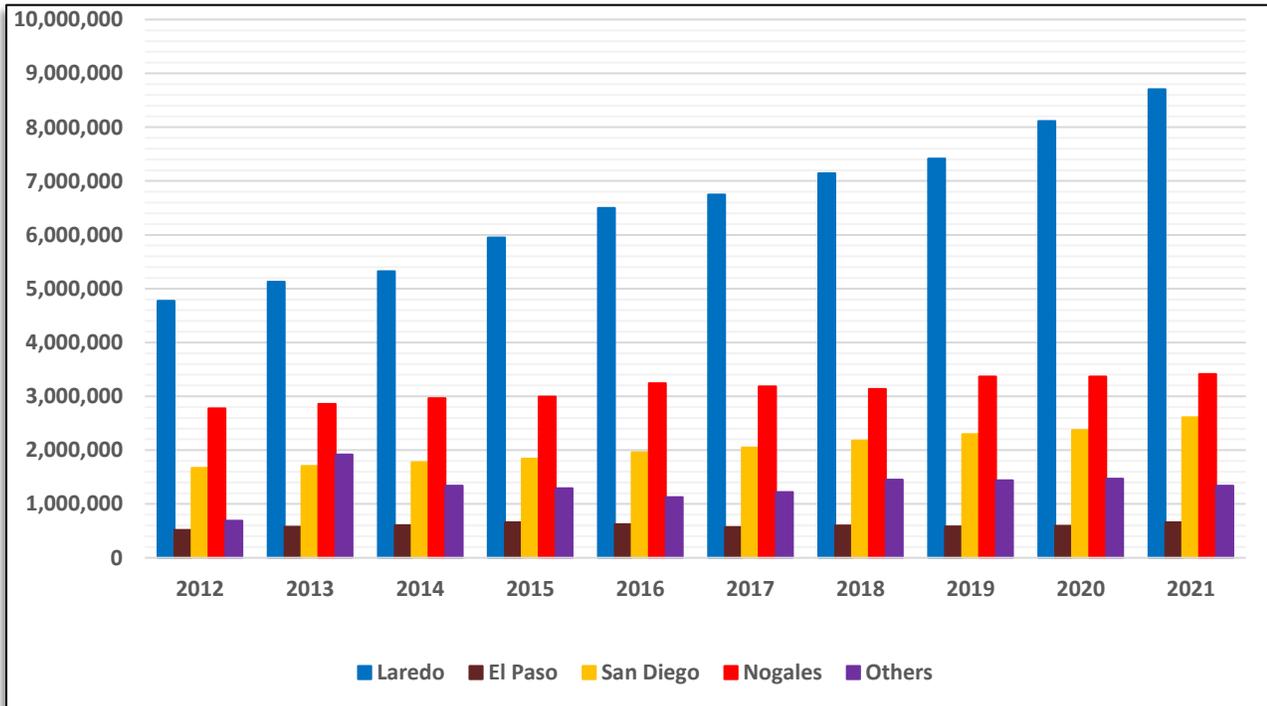


Figure 13: Total Value (Billion USD) of U.S. Exports to Mexico by U.S. Customs District, 2012-2021

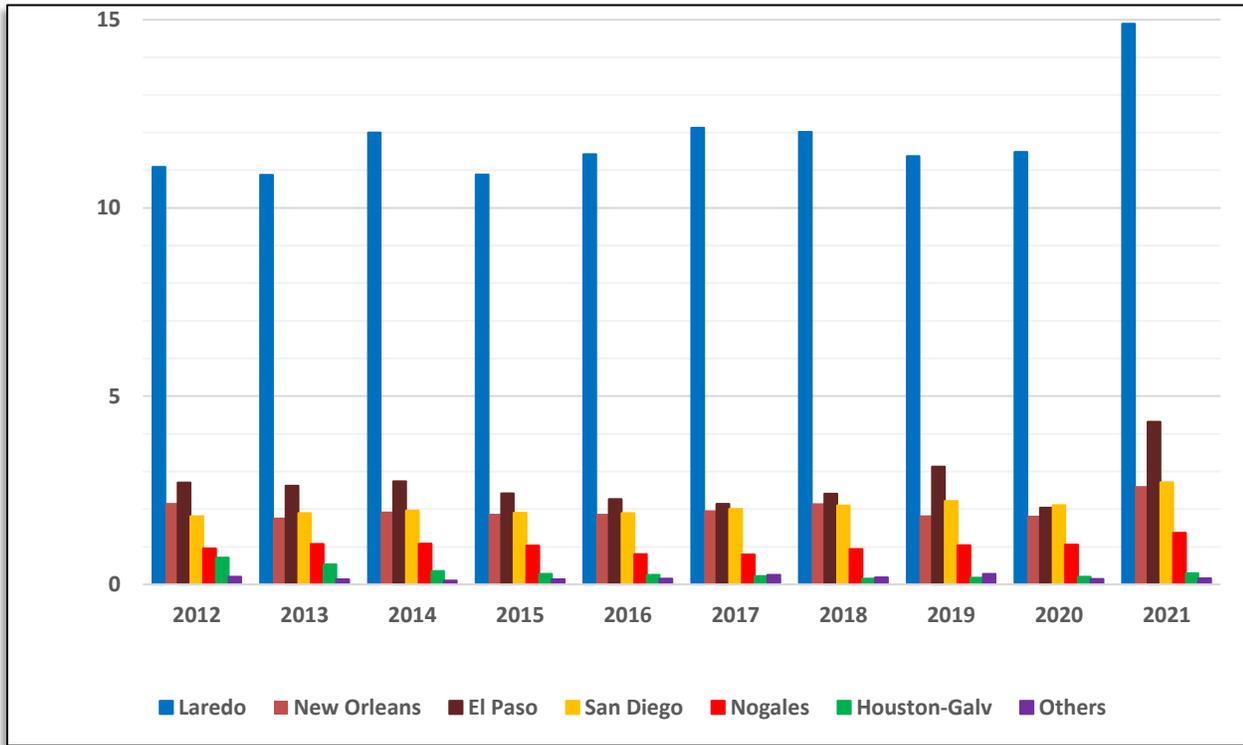
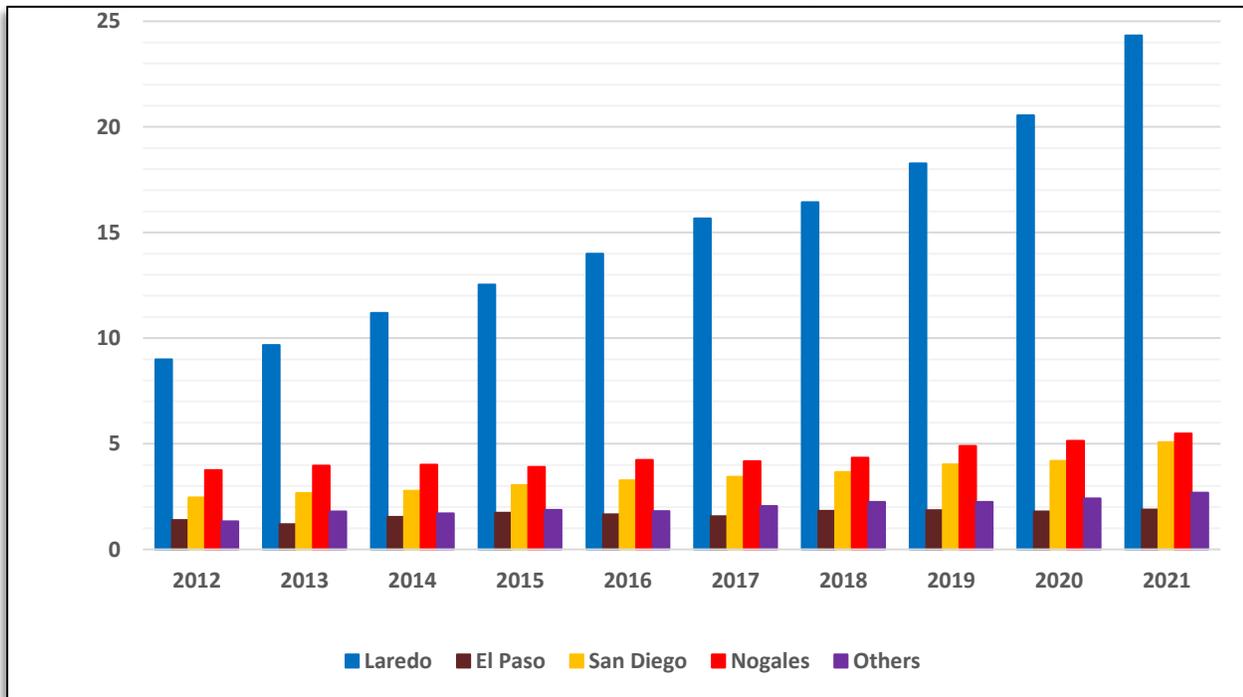
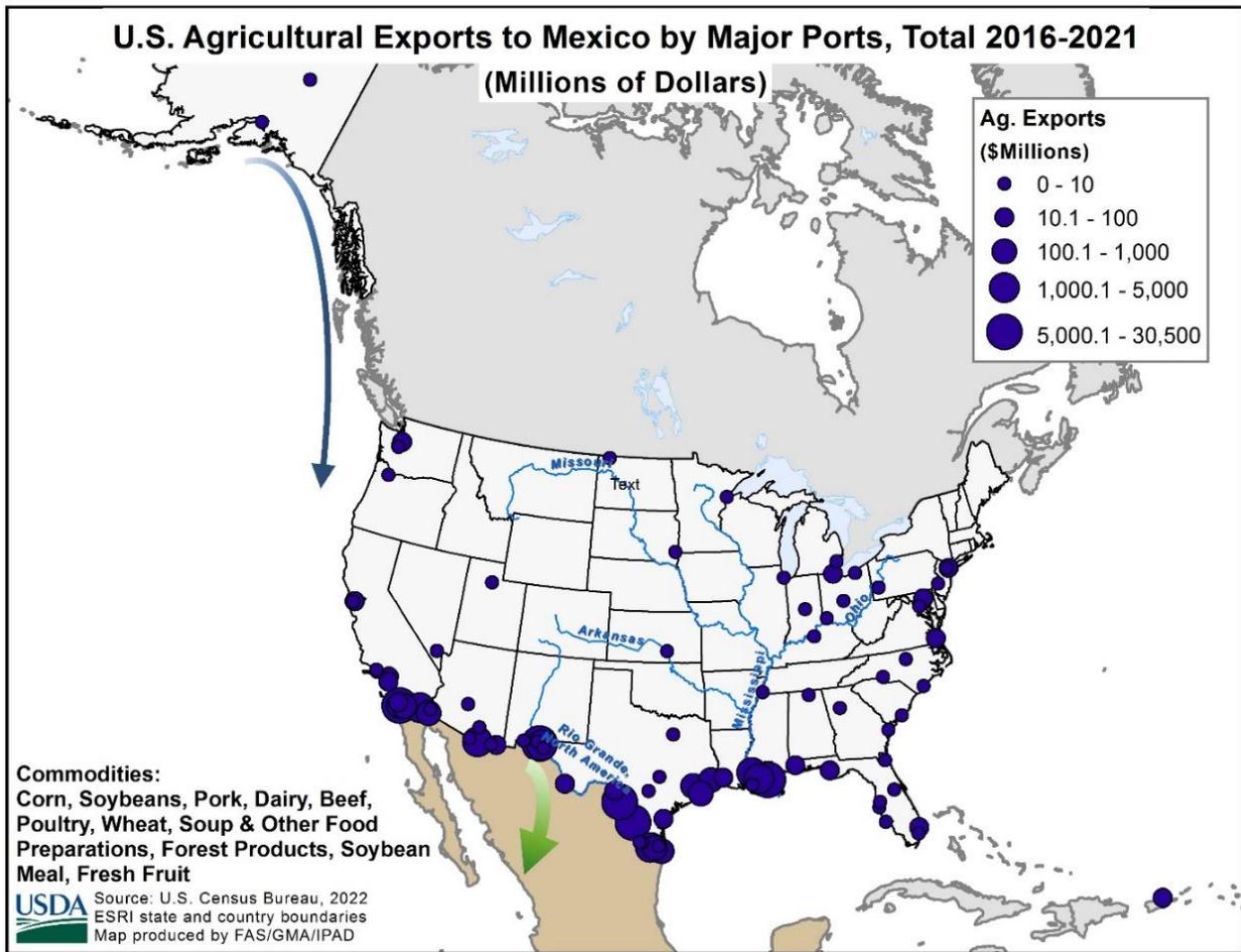


Figure 14: Total Value (Billion USD) of U.S. Imports from Mexico by U.S. Customs District, 2012-2021



Source: Global Agricultural Trade System

Map 4: Total Value (\$) of U.S. Exports to Mexico by U.S. Customs District, 2012-2021



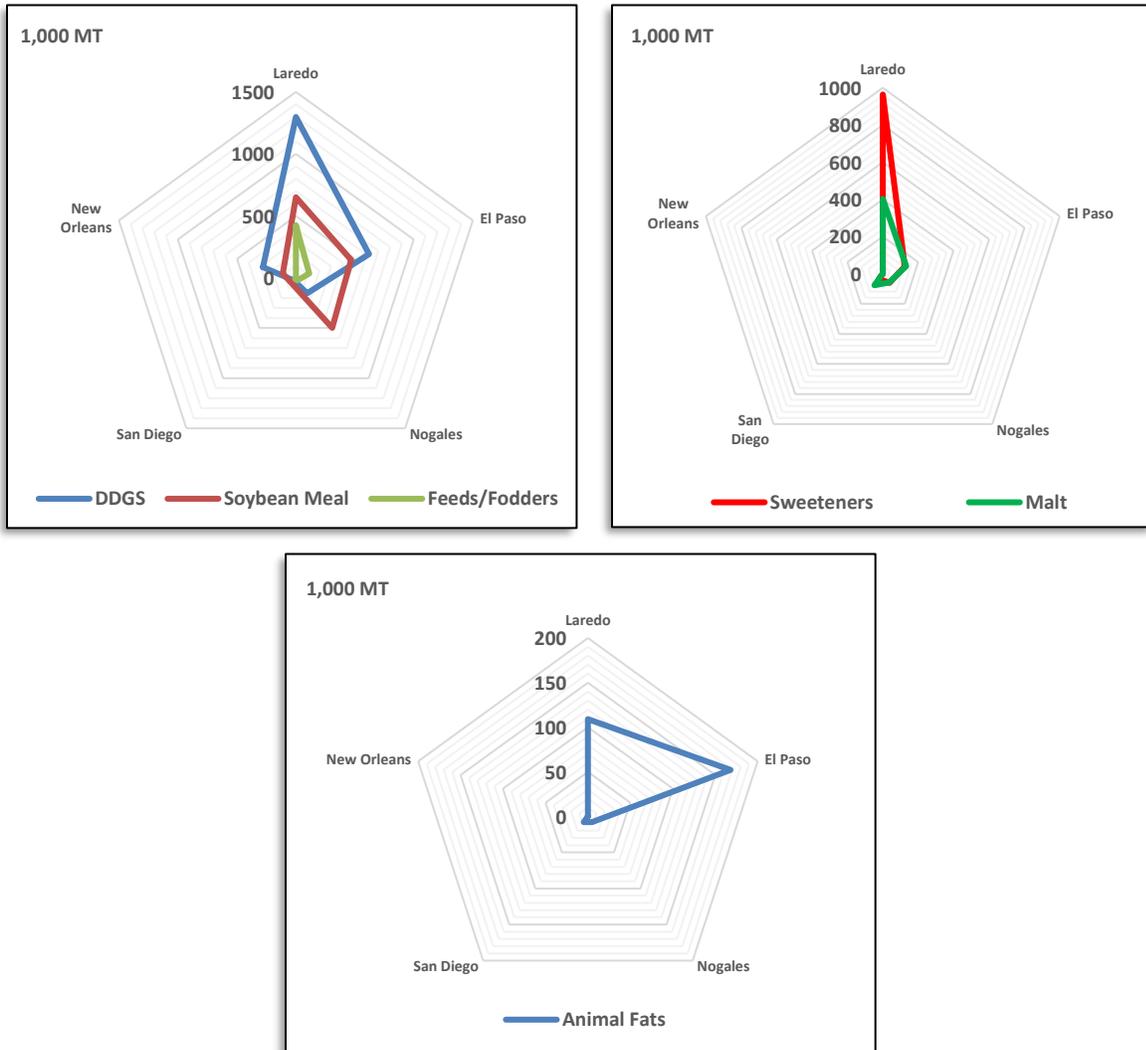
APPENDIX B: SUPPLEMENTAL GRAPHS FOR U.S. BULK/INTERMEDIATE EXPORTS

Figure 15: Five-Year Average, Monthly Volume of Bulk Exports to Mexico by Customs District, 2021 MT



Source: Global Agricultural Trade System

Figure 16: Distribution by POE of Major U.S. Intermediate Exports to Mexico, 2021



Source: Global Agricultural Trade System

Attachments:

No Attachments.