Challenges Facing Texas Pecans in the Mexican Market

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Challenges Facing Texas Pecans in the Mexican Market is a further dive into the report *Global Market for Texas Pecans*, funded by the Texas Department of Agriculture. For more information, please contact the Center for North American Studies, Department of Agricultural Economics, Texas A&M AgriLife Extension Service, College Station, TX, 77843-2124. 979-845-3070.

Challenges Facing Texas Pecans in the Mexican Market

Luis Ribera, Landyn Young, Bob Whitney[1]

Pecan Production

Pecan production in the United States since 2017 has been between 109-138 thousand metric tons (TMT). During 2021, the volume of U.S. pecan production totaled 115.7 TMT. This production is led by Georgia which was the source of 40 TMT of U.S. pecan production in 2021 and took over as the highest producer in 2020 when the state doubled production from 33.1 TMT to 66.8 TMT. New Mexico holds the title as the former highest pecan producing with annual production falling from over 40 TMT to 35 TMT in 2020, where it has stayed for 2021. The three other major U.S. states for pecan production are Arizona, Texas, and Oklahoma. Arizona and Texas produced similar volumes of pecans totaling between 12-18.5 TMT and 15-18.9 TMT, respectively. Production outside of these top five states has limited available information with exception to 2017 and 2018. The rest of the United States produces around 5 percent of the total volume of U.S. pecans for the two years available.

Estimated Annual Pecan Production for U.S. States, Metric Tons*

	2017	2018	2019	2020	2021
Arizona	12,698	12,644	16,372	13,238	18,558
Georgia	48,526	31,728	33,113	66,848	40,180
New Mexico	41,723	40,408	39,796	35,714	35,673
Oklahoma	6,349	4,082	9,592	3,059	5,116
Texas	22,222	15,238	17,016	18,961	16,213
Other States	6,735	5,138	-	-	-
U.S. Total	138,254	109,238	115,888	137,821	115,740

Source: National Agricultural Statistics Service, NASS/USDA

Production is estimated using data on acres bearing pecans and production per acre

U.S. Pecan Exports

The United States exported 32.9 TMT of in-shell pecans during 2021 worth a total of $136 million. This is down over 20 TMT compared to exports in 2017. A large portion of this decline in export volume can be attributed to a sudden drop of in-shell pecans exported to China, from 30 TMT to 10 TMT. Mexico has been the largest market for Texas in-shell pecans and has been the largest importer of in-shell pecans from the United States since 2018. Over half of all U.S. pecan exports are shipped to Mexico from 2018-2020. Only 47.4 percent, or 15.6 TMT, of the total exported volume of pecans was destined for Mexico from the United States in 2021. Mexico is the destination for such a high volume of these exports due to lower cost shelling operations located near the border which allows the United States to easily import newly shelled pecans.

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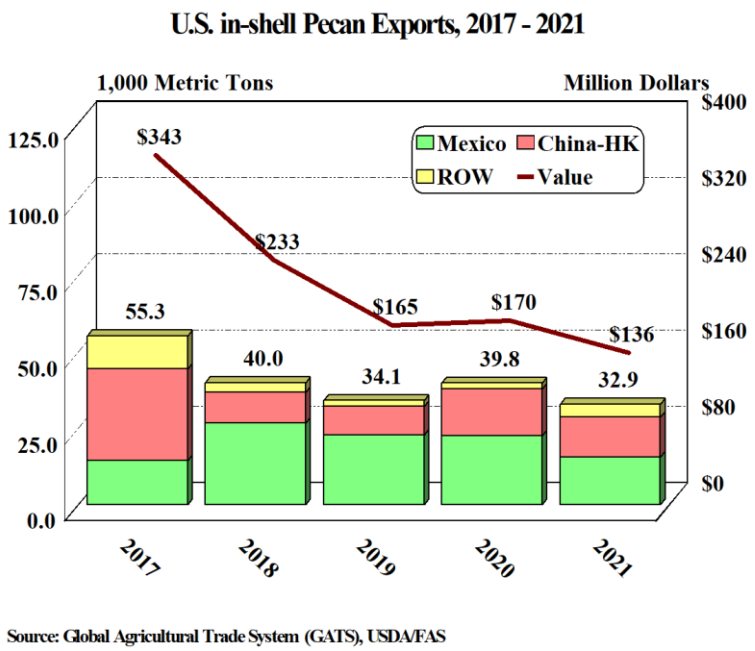
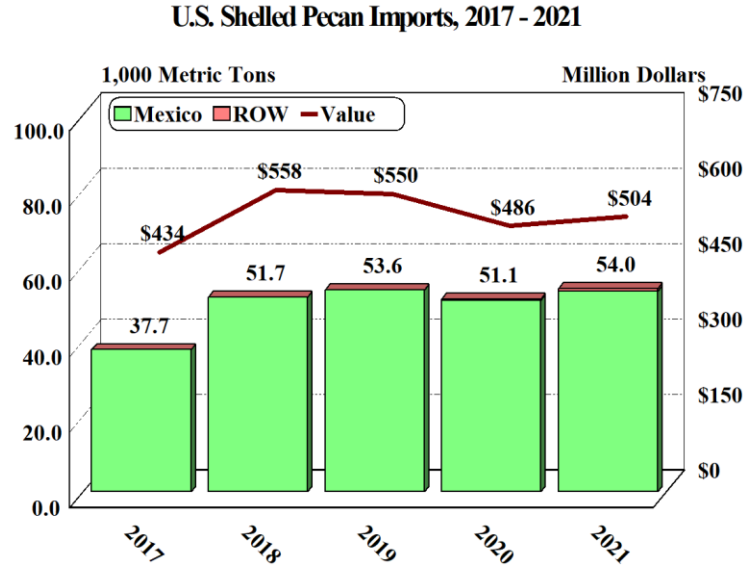


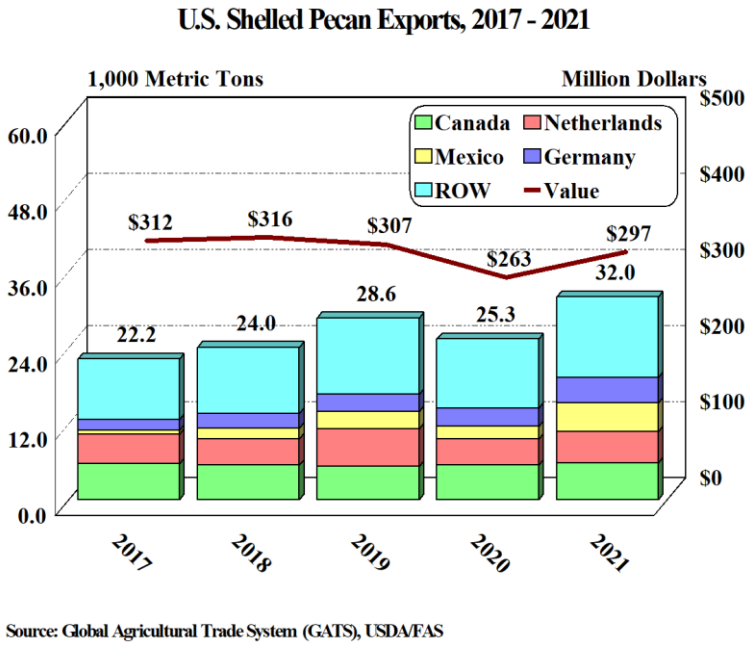
Source: Global Agricultural Trade System (GATS), USDA/FAS

Due to ease of access to low-cost labor in Mexico, much of this exported volume, and some additional Mexican produced pecans, will return shelled to either be sold domestically or packaged and exported elsewhere. During 2021, the United States imported 53.2 TMT of shelled pecans which represents a value of $503.7 million. Mexico has accounted for 98.5-99.9 percent of shelled pecan imports for the United States since 2017. During 2021, Mexico exported 53.1 TMT of shelled pecans to the United States, or 98.5 percent of shelled pecan imports for the year. The United States imports between two to three times the volume of shelled pecans from Mexico as it exports as in-shell pecans.

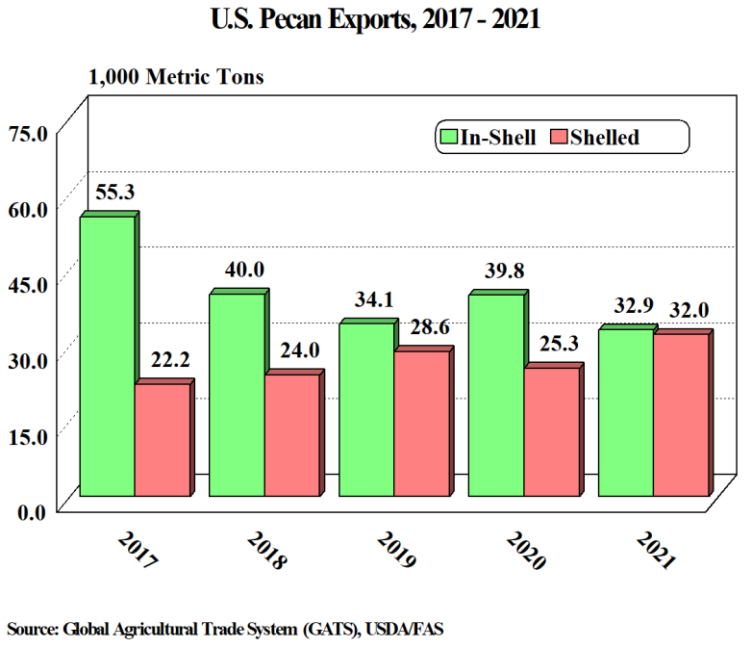


Source: Global Agricultural Trade System (GATS), USDA/FAS

The United States exported 32 TMT of shelled pecans worth $296.9 million during 2021. This was a 6.6 TMT increase from shelled pecan exports the year prior. The largest importer of U.S. shelled pecans during 2021 was Canada, totaling more than 5.8 TMT of shelled pecans or 18 percent of the total from the United States. Canada has been the largest importer of U.S. shelled pecans since 2017 by having imported 5.2-5.8 TMT of shelled pecans every year since 2017. The second largest market for shelled pecans for the United States is the Netherlands with 4.9 TMT of imports in 2021 which has been around the average since 2017. If the EU were ranked as a bloc, the EU would rank first importing between 8.5-12 TMT of shelled pecans from the United States. Mexico ranks as the third largest market for U.S. shelled pecans. Mexico imported 4.46 TMT of shelled pecans in 2021, more than double the year prior.

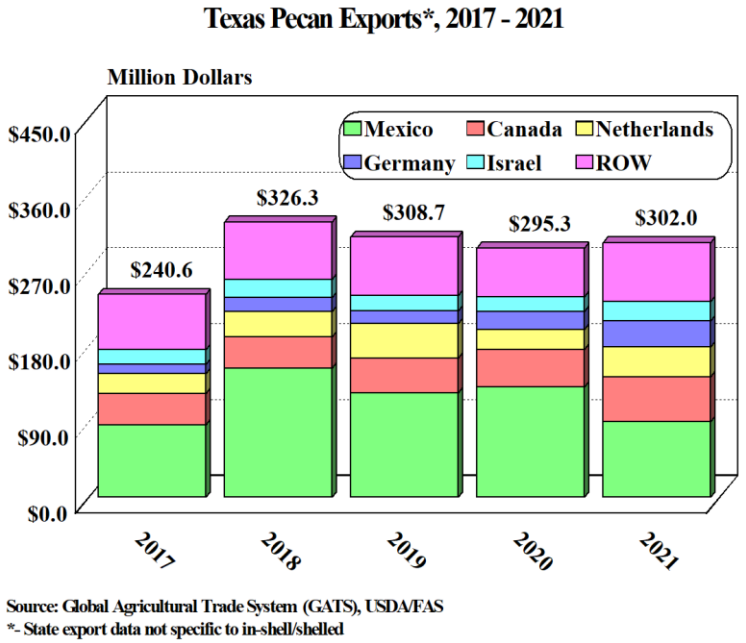


The United States has seen a decline in exports of in-shell pecans since 2017 of around 22.4 TMT. Despite this, there has been an increase of shelled pecan exports by 9.7 TMT. Assuming half the weight of in-shell pecans is the shell, the volume of in-shell pecans can be cut in half and used to compare the two on a shelled basis. Using this shelled basis, total exports of pecans average 46.6 TMT with exports ranging from 44-50 TMT since 2017.

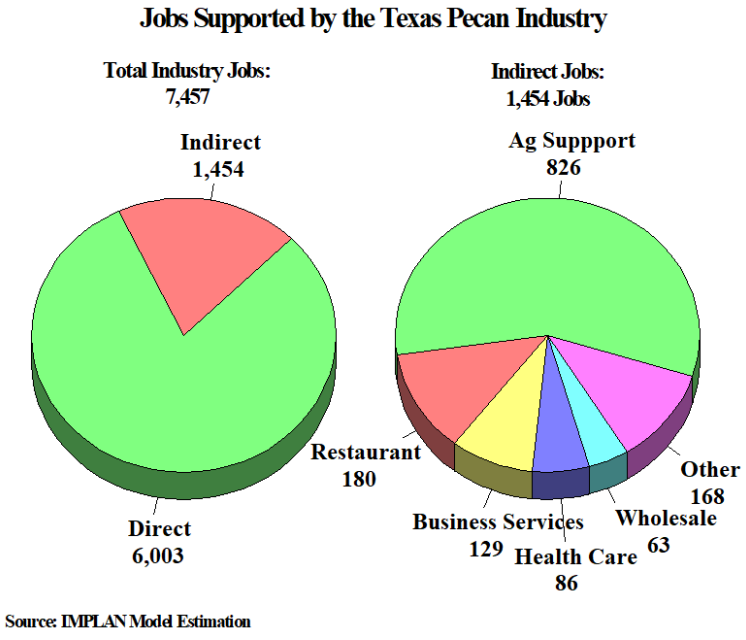


Texas Pecan Exports

Since 2017, Mexico has accounted for 29-47 percent of the value of Texas pecan exports with 2021 accounting for the lowest share for the period. After 2017, Texas pecan exports to Mexico increased from $85.9 million to $152.9 million and they remained in that area until declining in 2021. Texas pecan exports were led by Mexico, most of which was in the form of in-shell pecans. Pecan exports to Mexico totaled $89 million for Texas in 2021, more than $40 million less than export totals for the three years prior. Total value of pecan exports from Texas remained steady despite the decline in exports to Mexico. Exports from Texas to other major markets are what is making up for the lower export volume to Mexico. In 2021, Canada received $53.8 million of Texas pecans and Germany imported $30.9 million, both $9 million higher than 2020. The Netherlands saw the largest increase of $11.2 million to reach $34.9 million worth of Texas pecan imports during 2021.



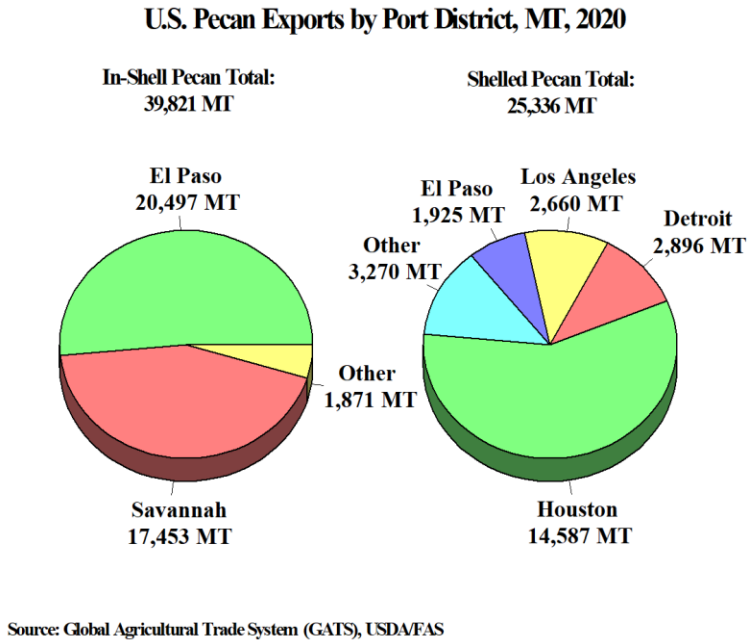
In addition to the $302 million of direct value from Texas pecan exports, there is an additional $175.6 million of economic value generated by Texas pecan exports. This results in a total economic impact of $477.6 million and a total of 7,457 jobs supported by Texas pecan exports. Of the 7,457 jobs supported by the Texas pecan industry, 6,006 are on-farm positions, 826 are supporting positions, with 626 off-farm jobs supported by Texas pecan production. These remaining jobs fall into other industries including restaurants, food, beverages, and retail, 180; business services, 129 jobs; health care, 86 jobs; wholesale, transport, and warehousing, 63 jobs; and real estate, 38 jobs. The remaining jobs are spread among numerous sectors.



U.S. Port Districts

The two primary port districts for exporting in-shell pecans in 2020 were Savannah and El Paso. These two ports accounted for 95.3 percent of pecans exported during 2020. The largest port district for exporting in-shell pecans during 2020 was El Paso which was responsible for 20.5 TMT of pecan exports which were all sent to Mexico. The second largest port district for in-shell pecans during 2020 is Savannah, Georgia. Through Savannah, 17.5 TMT of in-shell pecans were exported from the United States with the primary destinations being either China-Hong Kong (HK) or Mexico.

Four major port districts accounted for 87.1 percent of U.S. shelled pecan exports during 2020. Houston was far and away the largest district 14.6 TMT of shelled pecan exports, 57.6 percent of the shelled total for the United States in 2020. Shelled pecans leaving through the Houston port district were destined mostly for the Netherlands, Germany, and the United Kingdom. Detroit, Los Angeles, and El Paso together saw 7.5 TMT of shelled pecan exports from the United States. Pecans leaving through Detroit and El Paso were exported to only the bordering country. Los Angeles shelled pecan exports were exported to South Korea and the United Kingdom.



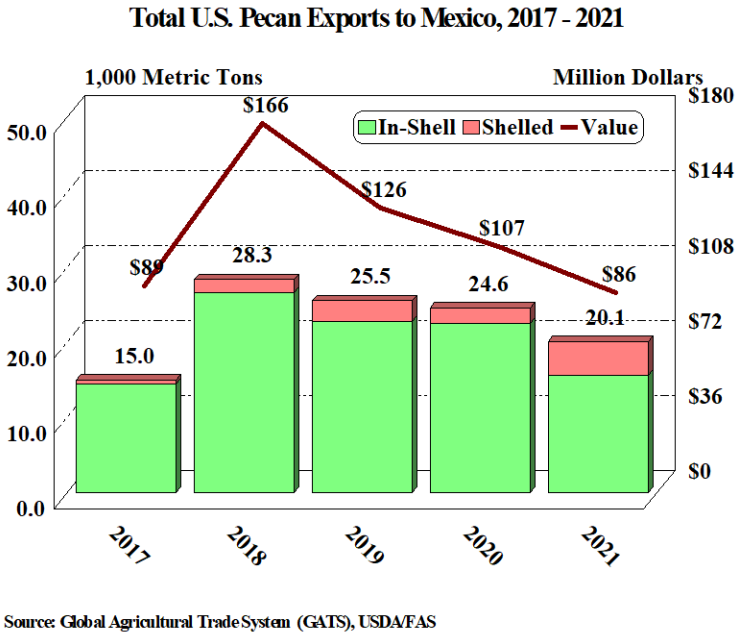
Source: Global Agricultural Trade System (GATS), USDA/FAS

U.S. Pecan Exports to Mexico

Pecans exported from the United States to Mexico are almost entirely in-shell. As noted earlier this is due to the proximity and low-cost shelling operations in Mexico. One thing to note is the growing demand for shelled U.S. pecans which has showed some decline of pecans exported previous years. In-shell pecan exports to Mexico have accounted for 47-67 percent of total the total since 2018, the lowest being 47.5 percent which occurred during 2021. Meanwhile, shelled

pecan exports to Mexico have accounted for 7-14 percent of total U.S. shelled exports. The highest year being 13.9 percent in 2021.

On a shelled basis, total pecan exports from the United States to Mexico has declined by 830-1,100 MT annually since 2018. Some of these declining exports can be credited to challenges that producers face exporting in-shell pecans to Mexico. Despite this, Mexico is still the largest partner with the United States when it comes to pecan trade.



Texas pecan exports to Mexico were reported to be $89.2 million in 2021 with an estimated economic impact of $141 million. These exports from Texas to Mexico are also the source of 29.5 percent of the jobs supported by Texas pecan exports, or 2,203 jobs. The remaining $51.8 million came from roles supporting the industry or other indirect sources.

Current Barriers to Trade

No Tariffs exist between Texas and Mexico for any variety of U.S. pecans. In-shell pecans grown in the five far west counties of Texas are allowed to export to Mexico if they have a phytosanitary certificate (PC) and import permit (IP). Shelled pecans also require a PC and IP. Unlike in-shell pecans, shelled pecans can be exported from anywhere in the United States to Mexico regardless of growing region quarantine status.

The largest barrier to trade between the Texas pecan industry and Mexico is a quarantine for shipping in-shell pecans. The quarantine for pecan weevils is discussed in more detail in the following section. The two other main issue that will be addressed for the Texas pecan industry is ease of movement for pecans that are not located in quarantined areas both in terms of quality acceptance and infrastructural issues.

An IP is obtained by the foreign importer. A PC may be obtained by contacting the USDA Animal and Plant Health Inspection Service (APHIS). Contact information for the Texas APHIS is found at: https://www.aphis.usda.gov/aphis/ourfocus/planthealth/sa_export/sa_ecs/texas/.

Pecan Weevil Quarantine

Since 1994, Mexico has had a quarantine for pecan weevils on multiple U.S. states. As time has passed, this quarantine area has grown to reach from Georgia to include most of Texas. This eventually led to a pecan weevil quarantine in the United States between the pecan producing states to prohibit movement to unaffected areas by weevils.

Throughout the United States much of the pecan producing areas fall into these quarantine zones for pecan weevil. East of Texas, nearly all pecan producing areas are in quarantine. In Texas, only five counties are granted relief of the quarantine; these are Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio. Arizona, California, and New Mexico all have no quarantine in place for pecan weevils, with exception to Otero County in New Mexico. These non-quarantined areas are all that are allowed to ship U.S. in-shell pecans to Mexico, despite Georgia, Texas, and Oklahoma being three of the nation's top five largest producers.

Texas phytosanitary regulations explain that pecans from quarantine areas can enter Texas for processing after having completed a cold storage treatment or hot water bath to kill weevils. Within Texas, pecans are allowed to cross from quarantine counties to non-quarantine counties if the destination of those pecans is to a treatment facility due to a potential lack of treatment options throughout quarantined areas. Meanwhile, eligible pecan exports to Mexico are required to have completed either a cold storage treatment, with the same time and temperature requirement as Texas, or a methyl bromide fumigation which Texas Department of Agriculture does not approve as a treatment option.

In a communication with Dr. Marvin K. Harris, an Entomologist with Texas A&M, it was discussed that the most effective way currently to deal with pecan weevils is cold storage. In Dr. Harris' study pecan weevils were unable to survive in -20 degrees Celsius, -4 degrees Fahrenheit for a minimum of 30 hours (Harris, 1973). Dr. Harris's research was used to set standard practice in Texas with current cold storage treatment in Texas requiring -17.78 degrees Celsius for seven days. Despite this proven and widely accepted treatment for weevils, trade of in-shell pecans is restricted for a majority of Texas and some of the other largest U.S. pecan producing states. Meanwhile, no quarantine is in place for shelled pecans from the United States, even if pecans were grown in areas that are quarantined for in-shell export.

Texas Department of Agriculture (TDA) recognizes four different methods of treatment for pecan weevils; these treatments include: cold treatment at -17.78 degrees Celsius for seven days, or -11 degrees Celsius for 14 consecutive days or until the lot has reached the desired temperature, as well as two methods of hot water bath. Each of these treatments correspond to findings of Dr. Harris' research. TDA also allows for any pecans produced in the United States to move from a quarantined area to a non-quarantined area in Texas so long as it has completed one of the approved treatment methods. Pecans grown in Texas in quarantine zones can move

untreated across the quarantine zone if they have received a TDA compliance agreement, pecans grown outside of Texas cannot obtain this agreement.

Dr. Luis Aguirre, a professor of entomology at Autonomous Agricultural University Antonio Narro in Saltillo and former Director of Plant Health at SENASICA (APHIS counterpart in Mexico), shared a report on SENASICA's phytosanitary requirements for U.S. in-shell pecans imports to Mexico (SENASICA, 2022). The document states that Mexico only accepts U.S. in-shell pecans from California, Arizona, New Mexico (except from Otero County) and Texas (exclusively from the five counties that are granted relief of the quarantine). Moreover, Mexico also requires that all U.S. in-shell pecans imported have one of three phytosanitary treatments, two of them are methyl bromide based and the other one is cold storage at -17.78 degrees Celsius for at least seven days. The cold storage requirement is the same in the United States and Mexico, and both agencies certify that the treatment eliminates the presence of the weevil. Therefore, regardless of the origin, there should not be any weevil infestation risk of U.S. in-shell pecans exported into Mexico if they are treated in cold storage.

For more information about TDA requirements for in-shell pecans moving through Texas visit: https://www.texasagriculture.gov/RegulatoryPrograms/PlantQuality/PestandDiseaseAlerts.aspx. Compliance agreements from TDA can be obtained by contacting: PlantQuality@TexasAgriculture.gov.

Acceptance of Lower Graded Pecans

Another issue that has arisen for many pecan growers in Texas is acceptance of lower grade pecans at the Mexican border. Many Texas producers have explained struggles trying to export pecans that are graded as #2, cracked, or stick-tights to Mexico. Currently, there is no additional requirements detailed for these lower quality pecans through APHIS or SAGARPA and these pecans should follow the same requirements as in-shell pecans to be exported.

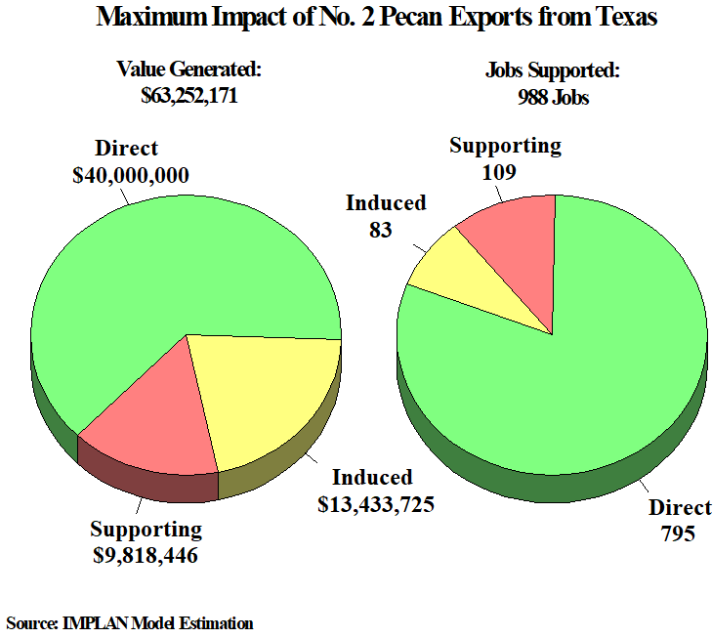
Through surveying experts in the industry, around 20 percent of total annual pecan production in Texas fell into one of those lower quality categories, or 3,146 MT. The results of this survey ranged anywhere from 5-50 percent of total Texas production being one of the three lower qualities.

Average annual export of these lower quality pecans to Mexico is estimated to generate $11.1 million of total economic impact for the Texas pecan industry. This includes $7 million of direct impact to the industry plus $1.7 million of indirect value through supporting industries in Texas and $2.4 million of value outside of the agriculture industry. Lower quality pecan exports to Mexico are the source of 159 jobs directly in the pecan industry or supporting agriculture with an additional 14 outside of the agriculture industry.

Meanwhile estimating the upper bound of the impact shows that lower quality pecan exports to Mexico could reach a total value of $63.3 million in Texas. This includes $40 million of direct impact to the industry and just under $10 million indirectly for supporting roles; as well as an additional $13.4 million in industries not related to agriculture. These estimates tell that there could be 879 jobs in the pecan industry and other supporting industries in Texas from exports of

lower quality pecans. Other industries including restaurants, wholesale, retail, and hospitals in Texas could also support 109 jobs because of this trade.

During 2021, the export of lower quality pecans from Texas to Mexico account for 1.5 percent of total economic output from Texas pecan exports. This also equaled just under 5 percent of total economic output generated from exports of pecans from Texas to Mexico. Comparing this to the upper bound estimate of 13.2 percent of total Texas exports and 44.8 percent of Texas exports to Mexico.



Experts in the industry explained that the volume of lower quality pecans has been on the rise over recent years, despite inconsistencies that some farmers have noted about acceptance of lower quality pecans at the border. With this average increasing, the impact of exporting lower quality pecans in future years can surpass the current expectations and become closer to the estimated upper bound. These lower quality pecans could grow from being 1.5 percent of the economic impact to 13.2 percent.

Shipment Issues Across Ports

Due to the quarantine of some of the pecan producing regions, Mexico has codified certain ports that are able to export pecans from the United States to Mexico. In Texas, there are two approved ports for pecan exports to Mexico: El Paso to Juarez and Del Rio to Acuna. Almost all the pecans destined for Mexico from Texas travel through the El Paso port district. The port at Del Rio falls outside of the non-quarantine zone for pecans, meaning in-shell pecans grown near this port are not eligible for export despite this being an approved location.

Producers have asked the question of why the port connecting Presidio and Ojinaga, which is in a non-quarantine zone for Texas grown pecans, is unable to process pecan shipments. This is because despite having the proper USDA officials on the United States side in Presidio, the

infrastructure is not in place on the Mexican side in Ojinaga to allow for officials to assess shipments of pecans.

Conclusion

The global market for pecans is very large. Texas is one of the leaders in pecan production in the United States and exports to Mexico, Canada, China, and EU. There has been growth nearly every year for U.S. pecan exports to each of these markets except for Mexico. U.S. pecans face competition from China, India, Senegal, and Argentina, but U.S. pecans are continually able to be competitive. Texas also has an advantage compared to many other states in having the ports of Houston and El Paso allowing access to the EU and to Mexico.

The U.S. pecan industry does not have to deal with tariffs when trading with Mexico while it does when exporting pecans to some other major markets like the EU. To further open trade for pecan growers in Texas to Mexico, non-tariff barriers that cut off the Mexican market from many Texas producers need to be addressed. Texas growers mentioned three primary concerns hindering trade with Mexico. One of the first was acceptance of lower quality pecans. No additional regulations are in place to prevent exporters from shipping pecans that are graded number two, cracked, or stick tight yet producers discussed this as one of their primary concerns. If Texas exporters were able to grow their exports of these lower quality pecans the impact could potentially increase from $11.1 million of total generated value in Texas to $63.3 million and would create over 700 job opportunities both inside and outside of the industry. Exporters also hoped to see additional infrastructure built to accommodate in-shell pecan exports. Of the two that are eligible, Del Rio and Acuna falls into a zone in quarantine for pecan weevil. Finally, the largest barrier for U.S. growers is pecan weevils and the quarantine in place. Scientific researchers agree on both the Texas and Mexican side that cold storage is an effective strategy for killing pecan weevils.

Mexico has been the largest importer of U.S. pecans historically but has been declining recently. There has been a mutual benefit that comes from working to increase pecan trade in Texas and Mexico. Texas producers can benefit from less costly Mexican labor shelling pecans, and the United States has imported around $500 million dollars of shelled pecans from Mexico annually. The market for pecans in Mexico is still present despite these recent declines in exports. Finding ways to remove the barriers that are in place can allow for Texas pecan growers to increase exports to the world’s largest market for in-shell pecans.

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