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Georgia Farm Gate Value 20-Year Trends – Blueberries and Pecans

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Blueberries and pecans are large contributors to Georgia's agricultural industry and economy and rank at the top of the fruit and nuts commodity group in UGA's farm gate value report. This publication discusses the trends regarding the farm gate value (FGV) farm gate value of blueberries and pecans in Georgia from 2001, when the farm gate project's data collection began, up until 2022.

Historically, pecans have dominated and ranked 1st in the GA fruits and nuts industry category for over two decades, contributing above 60% of the farm gate value. For instance, as far back as 2000, there were 140, 231 acres of pecan in Georgia generating over $129 Million, compared to 215,073 acres generating $401 Million in 2022. On the other hand, there were barely 5,607 combined acres (fresh & frozen) blueberries, with a combined farm gate value of over $22 Million compared to 27,192 acres with a value of $449 Million in 2022. Although pecans production has been inconsistent due to off and on season, overall, Georgia is also ranked number 1 pecan producing state in the nation. However, this ranking changed in 2018 when the Georgia experienced the worst hurricane disaster ever in the pecan orchards. About 17% of the State Pecan Industry was affected with 27,455 acres destroyed and 741,285 trees lost. An estimated crop loss was $100 million, while estimated tree loss was $260 million and future income $200 million. The total impact of the effect of Hurricane Michael was $560 million to the state of Georgia.

Georgia's number one ranking position was lost to New Mexico for two consecutive years until a rebound in 2020/21 crop year with a production of 142 million pounds. Another calamity that affected the pecan industry was the Chinese Tariffs war which particularly hurt the state because over 60% of all Georgia pecans were exported to China. For instance, prior to the Tariff War with China, the tariff rate (TR) for in-shell U.S. pecans was barely 7% per pound, which translated to $0.22 since the Cost, Insurance and Freight (CIF) was $3.20, thus a total of $3.42/lb. The first Chinese retaliation of 15% raised the price to $3.90/lb. and the subsequent retaliation of 25% on July 06, 2018, further increased the total cost to Chinese importers to $4,70/lb. Nationwide, the combined effect of Hurricane Micheal and the Chinese Tariff war resulted to 14% decrease in total supply, 58% decrease in domestic utilization and per capita consumption decreased from 0.51 lbs. to barely 0.30 lbs. according to USDA Report.

Prior to the US-Chinese Trade War, the Chinese buyers paid $3.42 per pound of U.S. pecans. However, the first wave of Chinese Government retaliation to the US tariff was by imposing 15% on pecan, up from the original 7%, thus increasing the pecan tariff to 22% from April 02, - July 05, 2018. This raised the total cost of US pecans to Chinese buyers to $3,90 after adding the CIF and TR respectively. On July 06, 2018, another 25% tariff rate was imposed, raising it to 47% and eventually increasing the total cost to Chinese importers to $4,70 per pound of US pecan.

In the past decade, the pecan export market to Asia surged, and most of Georgia pecans were shipped overseas, thus creating a natural shortage domestically. Due to the expanding export markets to China and other Asian countries, demand for both export and domestic markets was higher than supply, thus keeping prices fairly high.

Source: University of Georgia College of Agricultural and Environmental Sciences Farm Gate Value Report, calculations made by authors

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As a result of the persistent strong prices, there was robust increase in pecan acreages in Georgia and other pecan producing states. More-so, despite the drought and disease incidences and the alternate production nature of the crop, production in Georgia remained strong. Before Hurricane Michael, almost 50-70% of Georgia pecans ended up in China and other Asian countries. In 2019, China was still the leading market, importing over 40% of US In-shell pecans until the US Tariff war with China.

Blueberry is a very dynamic commercial crop in Georgia with a rapid growth in both acreages and farmgate value. Blueberry crop production started in Georgia after 1950 and reach its peak in 2018 with 30,166 acres in planted area. Initially, three kinds of blueberries were popular in Georgia, thus, rabbiteye, southern highbush in soil and southern highbush high-density pine-bark in beds but the high-density pine-bark system quickly disappeared. Due to its dynamism, the crop first surpassed the dominant pecan in 2014 when it became number 1 in the fruits and nuts category by generating $335 Million up from $30 Million in 2002. The 2014 value was equivalent to 43.4% of the total farm gate value compared to pecans with $313 Million equivalent to 40.6% of the total farm gate value in the same period. Blueberries and pecans have continued to trade the 1st place ranking for the past decade. Blueberries beat pecans again in 2018, 2020 and 2022 by contributing 42.3% of the farm gate value compared to 37.7% for pecans, equivalent to $215 Million on 27,192 acres. Despite its successes, blueberries like any other horticultural crop have also encountered several problems including pests, diseases, price volatility, tariff and natural calamities. For instance, although the per capita consumption increased from 1.58 lbs. in 2015 to 1.71 lbs. in 2016, the GA blueberry industry suffered serious freeze damage in 2017 with substantial crop loss. Furthermore, the industry suffered a 25% tariff imposed by the Chinese government in retaliation of the US created tariff war. The industry's continuous growth is due to expansion in acreages and better agricultural practices and continuous support from Extension and Research programs.

See Figure 1 for inflation-adjusted, normalized FGV of blueberries and pecans. Inflation adjustments were made using U.S. Inflation Calculator, an online inflation calculation tool which uses Consumer Price Index (CPI) data published by the Bureau of Labor Statistics. Real farm gate values are calculated by multiplying the nominal annual FGV of crop production by the CPI inflation factor for each year relative to 2020. Normalization allows us to more easily compare farm gate trends over time relative to 2020, which is a point of interest due to the large economic impact of COVID-19 both within and outside of the agricultural economic sector. To normalize figures relative to 2020, each crop's real annual farm gate value and acreage is divided by the base year 2020. Therefore, values in 2020 equal one and all other annual values are a ratio which represents their value relative to its 2020 value.

Source: University of Georgia College of Agricultural and Environmental Sciences Farm Gate Value Report, calculations made by authors

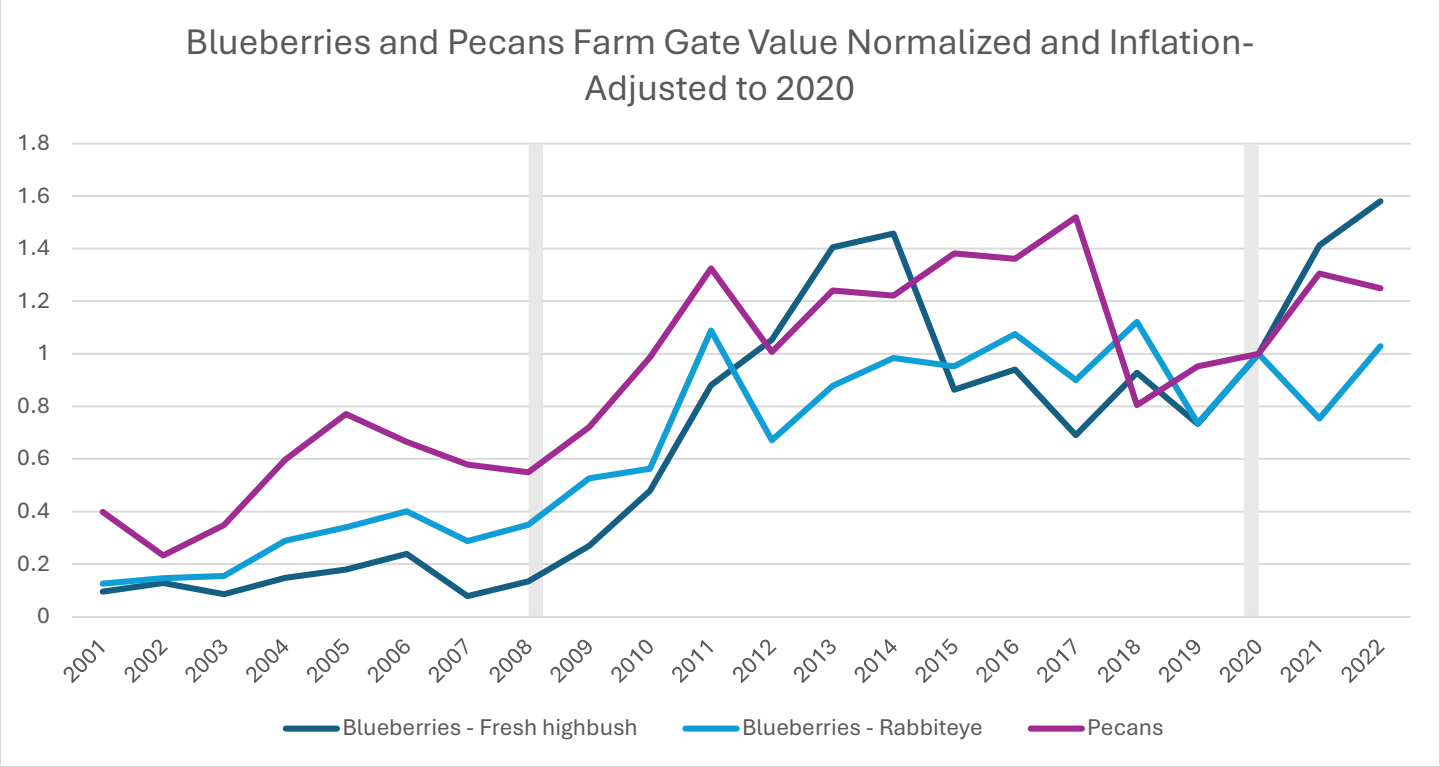

Figure 1. Normalized and inflation adjusted (to 2020) blueberry and pecan farm g ate values.

The Georgia Farm Gate Value (FGV) of blueberries and pecans reflects fluctuations in commodity prices and production factors in Figure 1. Various factors, such as the COVID-19 pandemic, weather events, and other market variables have caused notable value fluctuations in pecan and blueberry crops over the last two decades. These crops are similar in that producers are unable to quickly reduce or increase production from year to year in response to market conditions. This producer restraint is the result of the crops requiring multiple years of investment before a full crop can be harvested. While there are many similarities between pecan and blueberry trends, the market dynamics driving demand notably vary between the two crops. Global pecan production is dominated by the U.S., which produces nearly 80% of the world's pecan crop and exports nearly 30% of its production, according to the USDA National Agricultural Statistics Service (NASS). In contrast, the U.S. is a major net importer of blueberries.

See Figures 2 and 3 for normalized farm gate values and acreage of fresh highbush blueberries and pecans which gives a visualization of their growth over time relative to their own historical production.

Source: University of Georgia College of Agricultural and Environmental Sciences Farm Gate Value Report, calculations made by authors

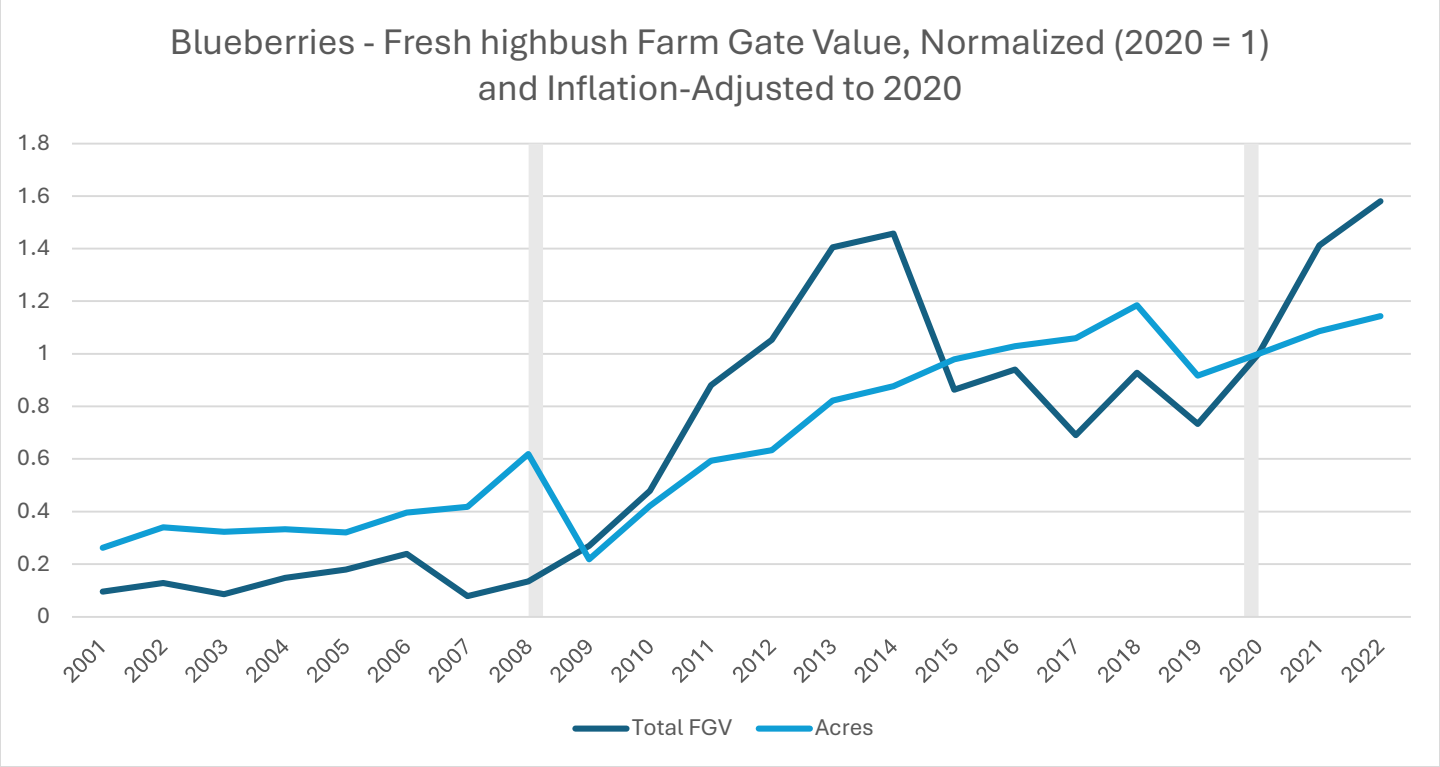

Figure 2. Normalized and inflation adjusted (to 2020) highbush blueberry farm gate values and acreage.

Over the decades evaluated, Georgia has surged to become the third-largest blueberry-producing state in the U.S., trailing only Washington and Oregon, by increasing total blueberry acreage from approximately 5,000 acres in 2001 to over 27,000 acres in 2022. However, the Georgia blueberry industry broke the record by becoming a one-time number one producer of blueberries in the U.S. in 2014 with a production of 96 million pounds. The increase in acreage has boosted the industry's capacity to partially meet domestic consumer demand. Despite this drastic increase in Georgia's acreage dedicated to blueberry production, the U.S. remains a net importer of blueberries. From 2001 to 2022, U.S. per capita consumption of blueberries increased by approximately 365%. The surge in domestic demand has resulted in the U.S. importing approximately 12 times as many fresh blueberries as it exports annually, according to the USDA Economic Research Service (ERS).

Despite benefiting from years of increasing consumer demand for blueberries, the Georgia blueberry industry has faced challenges. On multiple occasions, a late freeze has resulted in significant crop loss for Georgia's blueberry crops. Late freezes in 2015 and 2017 were two of the most notable years when severe weather conditions negatively impacted the FGV of the crop. In these years, crop loss estimates ranged from 40% to 80%. Despite these challenges, in recent years, the FGV of this crop has continued to increase in the state. The post-pandemic surge in blueberry FGV is the result of increased acreage in production, producers installing frost protection systems, and expanding consumer demand for fresh market blueberries.

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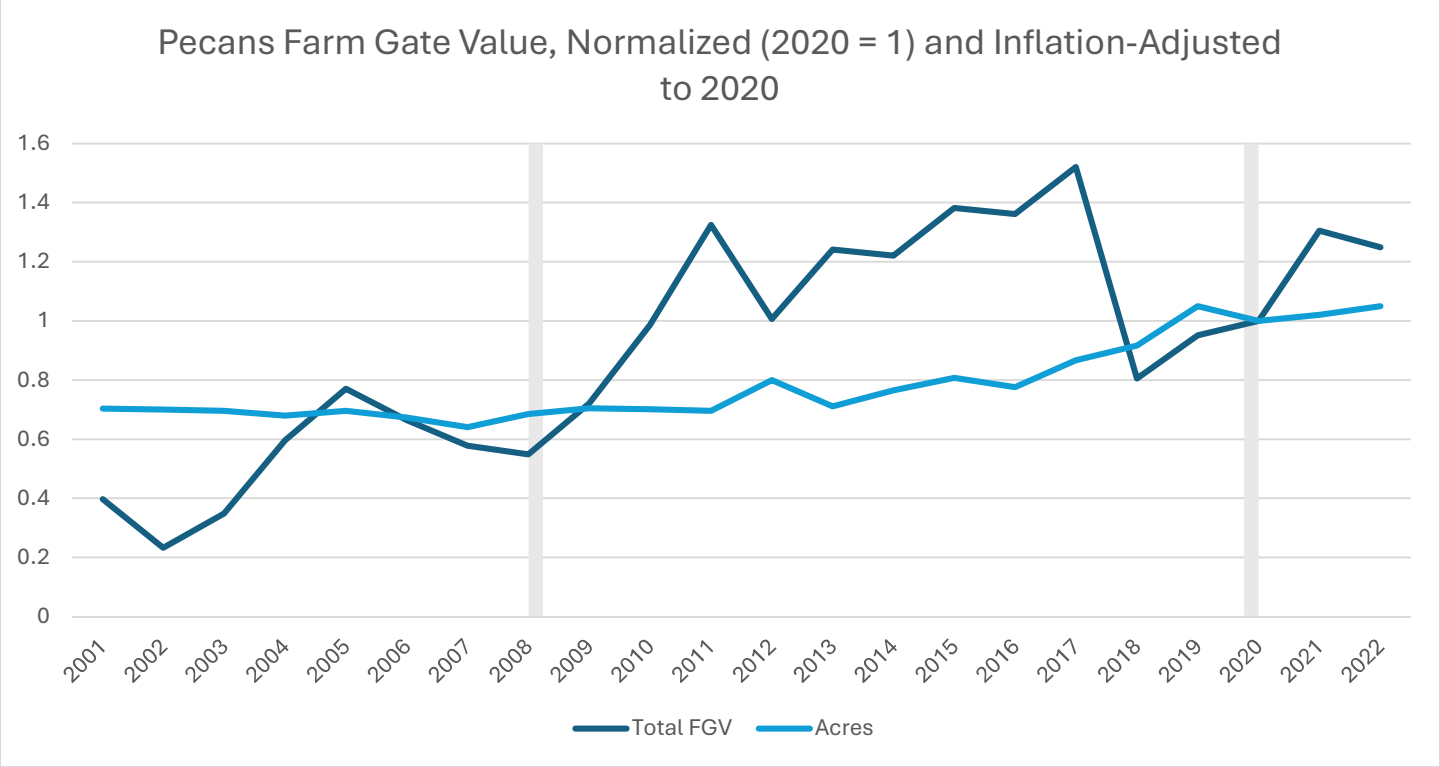

Figure 3. Normalized and inflation adjusted (to 2020) pecan farm gate values and acreage.

Following the Great Recession in 2008, the Georgia pecan industry experienced a surge in FGV until 2017, driven by consistent production and surging demand for pecans in Asia. The two factors that led to the sharp decline in FGV for the crop were the impacts of Hurricane Michael and reduced export demand for pecans. Hurricanes Matthew, Irma, and Michael all impacted state pecan production, but Michael in 2018 had the most significant and long-term impact on production due to tree destruction.

Hurricane Michael destroyed approximately 15% of Georgia's pecan tree acreage in 2018. The storm's effects resulted in blown-over trees, broken limbs, and nuts being prematurely knocked out of the trees. Although many of the pecan acres destroyed by the hurricane were replanted after the storm, production continued to lag because pecan trees require several years to reach production after replanting. In the 2017/18 production year alone, Georgia's pecan production fell by 48%, as documented by the U.S. Department of Agriculture, ERS. The trend of reduced production resulting from mature trees being destroyed continued for several years following the initial event.

Another primary market force that reduced Georgia's pecan FGV is the decline in U.S. exports of pecans by more than 50% from the record high in the 2017/18 production year. The reduction in export demand resulted in pecan market prices falling on average by approximately $0.78 per pound from 2017 to 2018, as reported by the USDA, NASS. Therefore, the sharp decline in pecan FGV after 2017, reflected in Figure 3, resulted from tree losses due to Hurricane Michael and a simultaneous sharp downturn in price stemming from reduced export demand for pecans.

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