

2023 Georgia AG FORECAST

STRATEGIC INSIGHTS FOR GEORGIA'S #1 INDUSTRY









College of Agricultural & Environmental Sciences
UNIVERSITY OF GEORGIA

A Message From The Dean and Director

Welcome to the 2023 Georgia Ag Forecast.

The College of Agricultural and Environmental Sciences (CAES) is pleased to have you here with us today. Our world-class agricultural economists have developed a comprehensive overview to help various sectors of our industry navigate the year ahead. Access to sound information enables us to make sound business decisions and through the efforts of our economists, CAES seeks to give you the resources you need to help your businesses and endeavors thrive in the coming year and beyond.

As your land-grant university, the University of Georgia pledges to conduct cutting-edge research on critical and emerging issues that are important to you. From this research, we aim to provide the best information and education available to producers and constituents to equip you with knowledge and decision-making tools for your business.

The Georgia Ag Forecast ensures that Georgia's agricultural industry is strong, stable and profitable.

Sincerely,

Nick Place

Nick T. Place, PhD
Dean and Director
University of Georgia College of Agricultural and Environmental Sciences

2023 Georgia AG FORECAST

Takeaways

The high points of the Ag Forecast subject areas

Economic Outlook

- In 2023, the postpandemic expansion ends, and a mild recession begins.
- The 2023 recession will be mild and short.
- Tight monetary policy because of high inflation is the main reason to expect a recession. Energy price shocks are a second reason to expect a recession.
- Georgia's economy will do better than the U.S. economy.
- Economic development projects will provide a solid push to Georgia's economy.

Peanuts

- Planted acres are expected to increase in 2023 in the United States and Georgia, a reversal of the 2-year decline in planted acres.
- Peanut disappearance of the 2022–2023 crop is projected to remain strong at 3 million tons; this is supported by forecasted increases in food use and exports over last year.
- Georgia forward contract prices are expected to be down with an estimated season average price of $475 per ton (ranging $450–$500 per ton).

Cotton

- Reduction in consumer demand for cotton related products will suppress cotton prices in 2023.
- The cotton production profit margin likely will be lower in 2023 with high input costs and low cotton prices.
- U.S. cotton acreage and production likely will decline in 2023 because of lower relative-price expectations with competing crops.

Fruits and Tree Nuts

- The three major U.S. peach-producing states experienced a significant fall in production which cumulatively reduced our 2022 production by 15%. Since it is difficult to predict whether the weather and water shortage that contributed to the decrease in production will persist, chances are that the situation may improve in 2023, but not by much.
- Georgia pecans will continue to dominate the tree-nut industry in the 2023 crop year and prices are expected to improve, especially if China increases its imports of U.S. pecans.
- The significantly high price received by peach and orange producers was instrumental in maintaining a strong consumer price index in 2022. The producer price index is expected to stay strong in 2023.
- In 2023, blueberry imports from Chile, Peru, and Mexico will continue to increase—domestic harvests only get into the market beginning mid-March, and total production is not enough to satisfy high domestic demand.

Vegetables

- Although the total U.S. fresh vegetable and harvested area decreased by 7% in 2021 compared to 2020, the harvested area is expected to improve in 2023—but not enough to offset 2021.
- Total vegetables and pulses imports were $18.6 billion in 2021, an increase of 10.2% compared to 2020. This import trend is expected in 2023 despite the supply chain disruption.
- Production input prices will continue to fluctuate depending on the situation in the Ukraine and Russia war. It's likely that prices will continue to escalate if the U.S. government does not come up with a contingency plan.

Takeaways, cont'd.

Corn, Soybean and Wheat

- The Russia-Ukraine war and Mexico's plan to ban genetically modified corn from the United States will increase uncertainty regarding corn prices.
- The United States and the world will continue to have a tight wheat supply in 2023, supporting higher than average wheat prices.
- The low ending stocks of U.S. soybeans indicate the need for more soybeans. Ending stocks might improve in 2023, leading to softer soybean prices.

Beef Cattle

- Severe drought elevated cow slaughter in 2022. With fewer cows to slaughter in 2023, cattle prices are expected to increase.
- China could become the largest export destination for U.S. beef in 2023.
- As per capita beef consumption grows, there also will be a growing interest in plant-based alternatives.

Pork

- 2022 U.S. pork prices continue to increase because of the limited number of slaughter-ready pigs.
- Good outlook for 2023 as feed prices likely decrease and export demand increases.

Poultry

- The domestic chicken market is strong with a good supply in the short- to midterm, though highly pathogenic avian influenza (HPAI) continues to loom large in the United States and could be a major impact in 2023.
- High building costs and increasing interest rates are obstacles to expansion on the live side.
- Future changes to the contract-grower pay model could be beneficial to growers, but caution is warranted.
- HPAI and California Proposition 12 ruling likely to have an impact on future table egg prices.

Honey Bees

- Honey production overall for 2022 was below average for the state. However, in some regions yields of two types of honey, northern wildflower and sourwood, were above average.
- Colony losses for commercial operations were higher than 2021, with some reporting a 60%–70% loss, and backyard beekeepers in some cases experiencing losses above 80%.
- *Varroa destructor* (parasitic mites) remains the leading cause of colony loss in Georgia and nationally.
- Demand for packages, nucleus colonies, and queens were down for 2022.

Timber

- Inflation remains a persistent challenge.
- Housing activity is beginning to moderate.
- U.S. South softwood lumber market share is increasing along with production capacity. Plentiful timber supplies and capital expenditures are positives.

Green Industry

- 2022 was a good year for many green industry firms, with many firms seeing increased profits.
- Green industry sales in Georgia are projected to be similar to 2022 levels.
- There are many unknowns going into 2023 that will impact green industry sales, including higher inflation and interest rates, mixed signals within the economy, and the impact of varying strength of the housing market in Georgia.

Agrotourism

- Visitor spending continues to increase in Georgia's rural communities.
- Total economic output for accommodations and food services in Georgia's rural counties increased 26.7% in 2021 compared to 2020.
- Visitations to state parks and outdoor recreation areas in rural communities increased 24% in 2021 compared to 2020.

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Overall Georgia and U.S. Economic Outlook

Jeffrey M. Humphreys, Director of the Selig Center for Economic Growth
Terry College of Business, University of Georgia

My main prediction for 2023 is that the postpandemic expansion ends and a mild recession begins. I expect the 2023 recession to last about 6 months, which is short. On average, the length of post-WWII recessions is 10 months. A 2023 recession is not inevitable, but it would take near-perfect monetary policy plus a lucky break to avoid one. I put the probability of recession at 75%. It will be extremely difficult for the Federal Reserve to cool down the economy enough to contain the highest inflation in 40 years without triggering a recession. Although I expect both the United States and Georgia economies will be in recession, Georgia's economy is better positioned to weather a recession than the U.S. economy.

My forecast calls for Georgia's inflation-adjusted gross domestic product to decrease by 0.2%, which is smaller than the 0.7% drop I expect for U.S. GDP. What will subtract from or add to 2023 GDP growth? I expect less spending on structures to subtract the most from GDP growth. Housing is the "canary in the coal mine" when it comes to recessions caused by Federal Reserve policy moves. Housing is the most interest-sensitive sector of our economy. Similarly, higher interest rates will cause businesses to spend less on nonresidential structures. Higher interest rates and lower profits mean decreased spending by businesses for equipment, which will subtract from GDP growth. Inventory changes will subtract slightly from GDP growth. Spending by consumers will neither add to nor subtract very much from GDP growth, which is good because consumers account for about 70% of GDP. That stability is one reason I expect the 2023 recession to be mild. Government spending will add to GDP growth, especially spending by state and local governments. Higher spending on intellectual property and software will add to GDP growth. Put it all together, and Georgia's GDP for the year is approximately flat. That is not good, but it is far better than our experience in recent recessions. For example, Georgia's GDP declined by 4% in 2020. In the Great Recession, Georgia experienced back-to-back years of negative GDP growth—GDP declined by 2% in 2007 and by 4% in 2008.

I do not expect Georgia's labor market to get hit very hard by the 2023 recession. On an annual average basis, the number of jobs will rise by 0.1%, which is better than the 0.5% decline we expect for the United States. The small positive gain reflects job growth early and late in the year that offsets midyear job losses. One reason I do not expect many job losses is that employers will be slow to lay off workers. Employers went to great lengths to hire enough workers in the wake of the pandemic and know that workers will be in short supply on the other side of the recession. In addition, many of the economic development projects that Georgia landed over 2020–2022 will be completed in 2023, which will offset jobs losses in other industries.

Most job losses will be in the most interest-sensitive sectors of the economy such as construction, financial activities, mining, and logging. Some industries will continue to add jobs, including health care, education, leisure and hospitality, professional and business services, transportation, manufacturing, and government. Many job openings posted in 2022 were not filled in 2022 and will carry over into 2023. Deferred hiring will help ensure that the recession is mild.

In 2023, I expect the unemployment rate to rise, but not too much. Georgia's unemployment rate will average 3.8% in 2023 compared to 3.3% in 2022. Georgia's unemployment rate will remain well below the U.S. unemployment rate of 4.4%, which means the Fed is likely to stop tightening monetary policy before labor market conditions get bad in Georgia.

In many ways the economies of both the United States and Georgia are fundamentally sound. Why then, do I expect a recession? There are three reasons: tight money due to extremely high inflation; massive energy price shocks; and negative wealth effects because of declines in asset prices. The Fed's rapid shift from an extremely stimulative monetary policy to a very restrictive policy is the main reason I expect a recession. The Fed said it will do whatever it takes to tame inflation. If you hit the economy over the head enough times with massive rate hikes, eventually it falls.

2023 Georgia AG FORECAST Takeaways

- **In 2023, the postpandemic expansion ends, and a mild recession begins.**
- **Georgia's economy will do better than the U.S. economy.**
- **Economic development projects will provide a solid push to Georgia's economy.**
- **The 2023 recession will be mild and short.**
- **Tight monetary policy because of high inflation is the main reason to expect a recession. Energy price shocks are a second reason to expect a recession.**

For many people, the doubling of mortgage interest rates in the first half of 2022 was the first tangible evidence of the Fed's rapid shift from easy money to tight money. Higher mortgage rates combined with the recent sharp run-up in home prices reduced housing affordability, which pushed Georgia's housing industry into recession.

In the second half of 2022, policy interest rates moved firmly into restrictive territory and began to affect the economy more broadly. But the strong labor market prevented a recession from developing in 2022. Georgia's unemployment rate hit lows rarely experienced in the last half century. People knew they could find a job, and at a higher salary than the job they currently had. That is why the employee quit rate was high even as talk about a potential recession escalated.

The strong labor market encouraged people to save less and spend more. The savings rate fell from about 8% in fall 2021 to less than 4% in fall 2022. As inflation roared, people took on more credit card debt to sustain their spending habits.

I believe that the Fed will need to raise the federal funds rate to between 4.75% and 5.00% to short circuit the inflationary wage-price spiral that began to gain traction in 2022. I expect the Fed to keep rates at that level until inflation slows to about 3%, sometime in the third quarter of 2023. At that point it will be clear that the economy is in recession. The U.S. unemployment rate will have risen above the full-employment unemployment rate of 4%. Mindful of its dual mandate is to ensure stable prices and maximum (full) employment the Fed will make its first rate cut. Shortly thereafter, Georgia's economic downturn ends, and a new economic upturn begins.

The energy price shock that we experienced in the wake of Russia's invasion of Ukraine is the second reason I expect a recession. Large energy-price shocks caused by supply reductions rather than robust demand growth almost always trigger or worsen recessions. There is no upside to high energy prices for Georgia. Our long commutes and heavy focus on transportation and distribution make Georgia more vulnerable than most states to oil-price spikes.

The negative wealth effects of declines in stock, bond, and home prices are another reason we expect a recession. While declines in asset prices rarely trigger recessions, they worsen recessions triggered by other factors. Moody's Analytics estimates that, on average, through the business cycle a $1 decline in stock market wealth leads consumers to reduce spending by 2.5 cents in the following year. Moody's Analytics believes the wealth effect will be smaller in 2023 because the recent decline in stock prices simply puts many investors back to where they were in early 2021. I believe that is correct. Most shareholders never thought they were as wealthy as the value of their holdings indicated at the beginning of 2022.

In 2023, these negative developments will feed off each other and in combination will end the expansion that began in mid-2020. The 2023 recession will be mild and short. Mild, because the labor market is strong, household balance sheets are in decent shape, and households are still sitting on unanticipated savings accumulated during the pandemic. In addition, several large economic sectors (e.g., health care,

GEORGIA BASELINE FORECAST, 2022–2023

Georgia	2018	2019	2020	2021	2022	2023
Gross domestic product (billions, 2012 USD)	539.3	558.3	536.7	567.9	581.0	579.8
Percent change	2.7	3.5	-3.9	5.8	2.3	-0.2
Nonfarm employment (thousands)	4,535.7	4,619.9	4,409.0	4,570.2	4,779.3	4,785.7
Percent change	1.9	1.9	-4.9	3.7	4.6	0.1
Personal income (billions, USD)	493.2	518.3	554.6	597.1	618.0	642.7
Percent change	5.1	5.1	7.0	7.7	3.5	4.0
Housing permits (total)	59,315	53,823	53,131	65,167	64,230	53,586
Percent change	15.8	-9.3	-1.3	22.7	-1.4	-16.6
Unemployment rate (percent)	4.0	3.6	6.5	3.9	3.3	3.8

Source: The Selig Center for Economic Growth, Terry College of Business, University of Georgia, November 7, 2022.

education, hospitality, and state and local government) will still be rebounding from the pandemic. It will be easy for those industries to post year-over-year gains. The recession will be short because the Fed will be mindful of its dual mandate. I believe the Fed will not tolerate the degree of economic damage that would result from raising policy interest rates high enough to achieve its explicit inflation target of 2%. I believe the Fed will settle for 3% inflation. If I am correct, the 2023 recession will only last two quarters. Should the Fed insist on 2% inflation, then recession will be longer and more severe.

There are state-specific forces that will help Georgia's economy better weather the 2023 recession than the U.S. economy. One main advantage is the enormous number of projects in Georgia's economic development pipeline. In fiscal year 2022, Georgia posted another record year in economic development. There were 358 projects, more than 51,000 jobs, and over $21 billion in investments. Foreign direct investment was especially strong.

Another factor behind the expectation that Georgia's economy will do better than the U.S. economy is that Georgia will get more leverage than most states from higher new vehicle sales. I expect U.S. auto sales to increase by about 15% in 2023, which is an unusual forecast for a recession year. Typically, auto sales tank during recessions, especially when the recession is triggered by higher interest rates. The explanation is simple. Many folks that wanted to buy a new car could not do so because not enough cars were available. New car dealers had a strong advantage over buyers, especially for popular models. Not surprisingly, many people kept their current cars longer than they would if market conditions were normal. The average age of cars on the road rose to a record 12.2 years. Many cars on the road are at the end of their economically useful lives. They need to be replaced. In 2023, more new cars will be available for purchase. Pent up demand will be unleashed. Sales of new vehicles will soar.

The nation's automobile manufacturing industry is becoming increasingly concentrated in the Southeast. Georgia has had immense success growing the electric mobility industry. For example, Hyundai Motor Group will invest $3.5 billion to build its first dedicated electric vehicle manufacturing plant near Savannah, creating 8,100 jobs. The Hyundai project is the largest economic development project in Georgia's history.

Georgia's outsized transportation, distribution, and logistics industry will continue to grow much faster than that of the nation. Of course, activity in transportation and distribution is cyclical. Growth will certainly slow, but growth will not stop. That is highly unusual for a recession. Cargo volumes will grow as major transportation and distribution projects announced over the past 2 years will build out and become operational in 2023. A second reason for our optimism is that recent capacity additions will enable Georgia's transportation and logistics providers to take market shares from providers in other states. For example, a second inland container port will open near Gainesville. In addition, the Mason Mega Rail Terminal at the Port of Savannah is providing more frequent and faster rail services to Midwestern cities like Memphis, St. Louis, and Chicago, as well as cities in the Ohio Valley. The build-out of recent economic development projects involving the relocation and expansion of manufacturers also bolsters prospects for Georgia's transportation and logistics providers.

Another reason Georgia will outdo the nation is that our population will grow at an annual pace that is more than double the national average. According to United Van Lines, the primary reason people move to Georgia is a job, followed by family connections, lifestyle choices, retirement, and a lower cost of living. Compared to most other states Georgia will continue to compare well on all those dimensions in 2023. Usually, net migration drops sharply during recessions, but we expect a very slight drop. That is because unemployment rates will increase quickly in states like California and New York that typically send large numbers of people to Georgia.

Home sales and homebuilding subtracted from GDP growth in 2022. Housing activity will decline even more sharply in 2023. High mortgage rates, the recent run-up in home prices, and low confidence in the economic situation will prolong and steepen the housing downturn that began in mid-2022. The National Association of Realtors estimates that single-family homes were 31% less affordable in mid-2022 than in mid-2021. Consequently, I expect Georgia's homebuilders to begin construction on substantially fewer new single-family homes in 2023 than in 2022.

As of mid-2022, Georgia's existing home prices were 46% higher than prior to the COVID-19 recession. Cumulative inflation over that period was only 14%. I expect existing home prices to drop by about 12% in 2023. In addition to decreased affordability, overvaluation is another reason home prices will drop.

Despite substantial overvaluation, the fundamental supports for home prices are better now than during the Great Recession. I do not expect a repeat of the housing bust. One difference is that during the postpandemic housing boom people were buying homes to live in or as long-term investments. Not many homes were flipped. Those dynamics will limit home price declines. In addition, supplies of homes are constrained by years of underbuilding. There's not much new product in the production pipeline. That is the opposite of the situation during the Great Recession when most markets were overbuilt and there were too many homes in the production pipeline.

In the wake of the 2023 recession, home prices will be 12% lower than in early 2022, but still well above prepandemic levels. Unless the home was purchased very recently, a 12% decline in home prices is a paper loss. Most homeowners never expected home prices to rise as much as they did in the wake of the pandemic. Most have not fully factored recent home price appreciation into their financial plans. For example, people did not borrow heavily against their new home equity gains to anywhere near the extent they did prior to the Great Recession. Plus, rents are soaring and will continue to do so, which will help support home prices.

Another significant difference between the postpandemic housing boom and the housing boom that preceded the Great Recession is that most new home mortgages are very well collateralized. I do not expect homeowners to default and walk away. I do not expect a wave, or even a mini wave, of bank failures. Housing is not the epicenter of this recession and does not pose a systemic risk to the economy.

On the other side of the 2023 recession, I believe there's good upside potential for the housing industry because of both solid demographics and the increased importance of the home as a place to work, to learn, and to play. In addition, there will be an immediate need to build new homes. In 2024, homes will be in short supply. The homebuilding industry may not lead the recovery of our economy, but it will support and contribute to it.

As always, there are risks to the baseline forecast. The main downside risk is that inflation is higher and more stubborn than expected which leads to even more restrictive monetary policy and larger asset price corrections. A second downside risk is additional, and potentially larger, energy-price shocks because of broader military conflicts, terrorist acts, natural disasters, or further worsening of relations with major OPEC producers. Another geopolitical risk is further deterioration of the relationship between the United States and China. For example, disagreements over Taiwan could disrupt shipping activity in the Taiwan Strait.

We need a lucky break. We are overdue. One upside possibility is that geopolitical conflicts ease quickly in positive ways. For example, a good, quick resolution of the war between Russia and Ukraine would bring down energy and other commodity prices, improve supply chains, and increase confidence. I am hopeful, but I am realistic and therefore do not base the forecast on that outcome. Another upside potential is that more economic stimulus is agreed upon after the midterms. Politically, that seems very unlikely, and might spook the bond markets. Just look at what happened in the United Kingdom shortly before Halloween. Another possibility is that the Fed threads the needle and executes monetary policy perfectly and achieves a "soft landing" for the economy. I am hopeful, and it is possible, but I do not believe that is the most likely outcome.

In closing, I expect the postpandemic expansion to end and a recession to begin. The recession is likely to be mild and short. The Fed's move from easy to tight money will trigger the recession. Housing is already in recession and will suffer the most, but several large economic sectors will continue to expand. Our labor market will hold up well. The unemployment rate will not rise very much. I expect an economic recovery to begin late in 2023.

UNITED STATES BASELINE FORECAST 2022–2023

United States	2018	2019	2020	2021	2022	2023
Gross Domestic Product (billions, 2012 USD)	18,606.8	19,032.7	18,384.7	19,427.3	19,738.1	19,600.0
Percent change	2.9	2.3	-3.4	5.7	1.6	-0.7
Nonfarm employment (millions)	148.9	150.9	142.2	146.1	151.2	150.5
Percent change	1.6	1.3	-5.8	2.8	3.5	-0.5
Personal income (billions, USD)	17,706.0	18,424.4	19,627.6	21,092.8	21,725.6	22,420.8
Percent change	5.1	4.1	6.5	7.5	3.0	3.2
Civilian unemployment rate (percent)	3.9	3.7	8.1	5.3	3.8	4.4
CPI-U (annual percent change)	2.4	1.8	1.2	4.7	8.1	4.0

Source: The Selig Center for Economic Growth, Terry College of Business, University of Georgia, November 7, 2022.

Peanut Situation and 2023 Outlook

**Amanda R. Smith, Senior Public Service Associate,
Department of Agricultural and Applied Economics, University of Georgia**

Prior to planting decisions for 2022, the peanut industry had come off a bountiful production year with excellent average U.S. yields. The 2021–2022 crop was the third highest peanut crop on record and supply was expected to exceed consumption by 140,000 tons, resulting in ample carryover of 1.18 million tons. Furthermore, the quality of the 2021–2022 crop was high and there was no rush to "buy" peanut acres with early forward contracts.

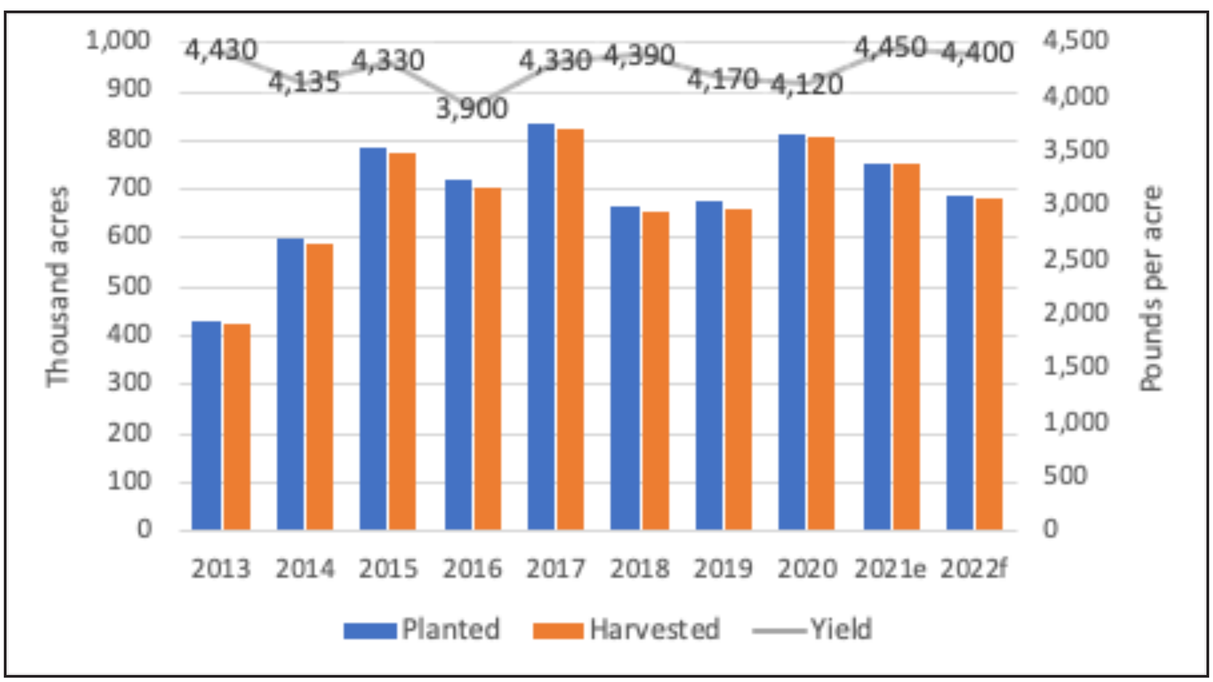
Prices for cotton, a crop that competes for acres with peanuts, hit record highs during early 2022, leading to a shift in planted acres away from peanuts into cotton. Georgia farmers planted 685,000 acres of peanuts in 2022, down 9.3% from the 2021 crop and the 2nd year in a row that planted peanut acres declined in Georgia and nationally. U.S. planted peanut acres totaled 1.46 million acres, a reduction of 7.7% from the previous year.

Yields of the 2022–2023 crop are estimated to be relatively good. The U.S. Department of Agriculture (USDA) National Agricultural Statistics Service forecasted 2022 yields at 4,090 lb per acre for the U.S. and 4,400 lb per acre for Georgia, down 1% from 2021. If realized, this would be the fourth-highest average Georgia yield on record and third-highest average U.S. yield. U.S. peanut production is estimated at 2.89 million farmer stock tons, down 9.3% from 2021. As determined by the USDA Federal State Inspection Service, quality of the 2022–2023 crop looks good with 99.8% of the crop grading Seg. 1, the highest quality grade segment.

Demand for edible peanuts remains high with recent estimates of consumption at 7.9 lb per capita. Consumers continue to choose edible peanut products although the speed of growth has slowed. For the 2021–2022 marketing year, there was an increase in peanuts used in candy (up 13.1%) followed by a decrease in snack peanuts (down 4.0%) and peanut butter (down 2.7%). So far in the 2022–2023 marketing year, peanuts used in candy and snacks are down but peanut butter use is up. Total food use for the 2022–2023 marketing year is forecast at a record 1.69 million tons. If realized that would be an increase of 2.1% from 2021–2022. Exports are projected up 1.5% to 600,000 tons. Crush is forecast to be down to 403,000 tons, a decrease of 4.2% from 2021–2022. These all combine to an expected total peanut disappearance of 3.07 million tons for the 2022–2023 marketing year, potentially the second highest consumption on record.

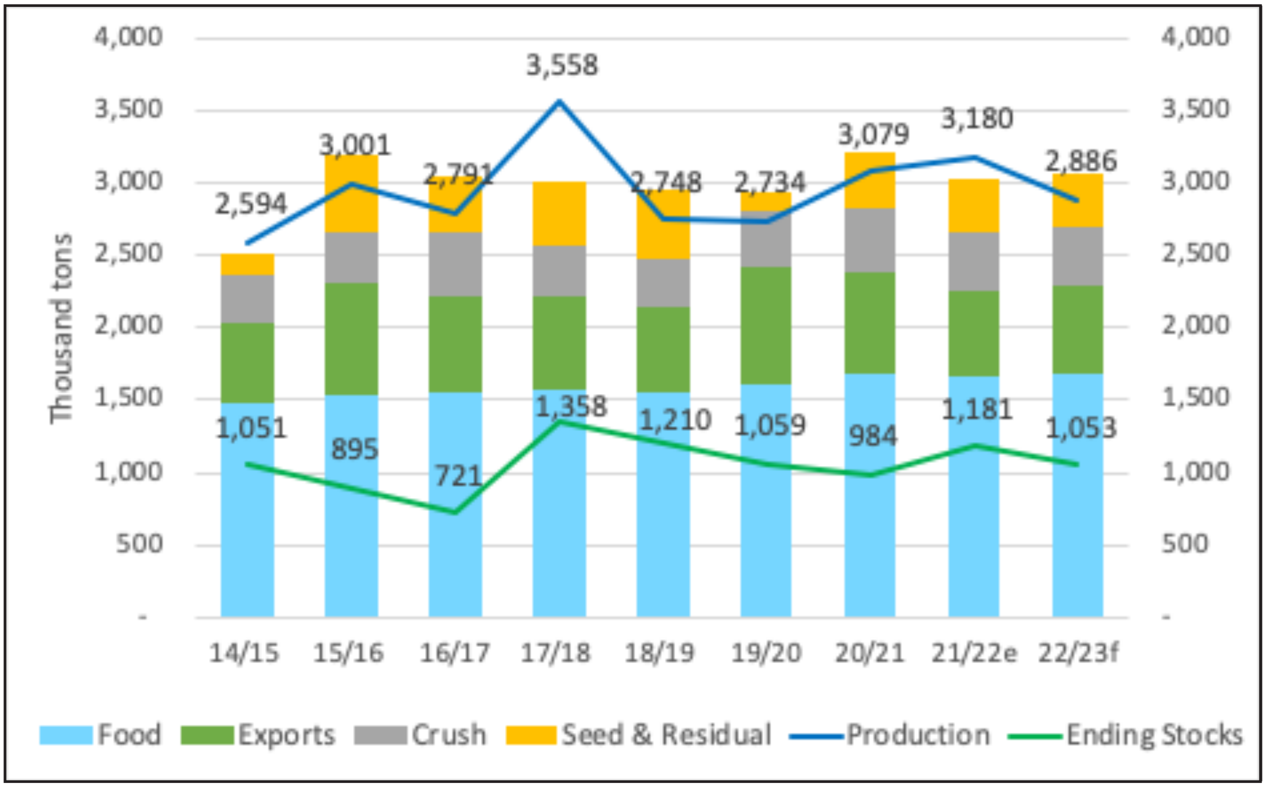
Looking ahead to 2023, carryover is expected to be around 1 million tons of quality peanuts. However, the competition for acres with cotton is also expected down. Continued high fertilizer prices and significantly lower expected cotton prices may push farmers into planting peanuts. Given all of these factors, it is not unreasonable to expect lower-priced forward contracts than we saw in 2022. Season average prices ranging between $450–$500 per ton are sensible planning expectations for Georgia growers in 2023.

Figure 1. Georgia Planted and Harvested Acres and Yield per Acre, 2013–2022



Peanut Situation and 2022 Outlook, continued

Figure 2. Total U.S. Peanut Production, Disappearance and Ending Stocks



2023 Georgia AG FORECAST Takeaways

- **Planted acres are expected to increase in 2023 in the United States and Georgia, a reversal of the 2-year decline in planted acres.**
- **Georgia forward contract prices are expected to be down with an estimated season average price of $475 per ton (ranging $450–$500 per ton).**
- **Peanut disappearance of the 2022–2023 crop is projected to remain strong at 3 million tons; this is supported by forecasted increases in food use and exports over last year.**

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The 2023 Cotton Outlook

Yangxuan Liu, Assistant Professor, Department of Agricultural and Applied Economics, University of Georgia

Cotton prices in 2022 behaved like a roller coaster ride, combined with an increase in volatility and the highest price achieved over the past decade (Figure 1). Multiple rapid market rallies in the cotton market were observed in 2022, followed by a quick withdrawal of speculative money, resulting in an immediate plunge in cotton prices after the rally. For 2022, the highest daily spot cotton price was observed on May 4, 2022, at 149.76 cents per pound, and the lowest price on October 31, 2022, at 72.26 cents per pound. Several factors causing high cotton-price volatility in 2022 include high (broader) stock market volatility, soaring inflation, supply chain disruptions, rising interest rate, appreciation of the U.S. dollar, and severe drought in major cotton production areas.

Economic Slowdown and Reduction in Cotton Demand Globally

Looking ahead, 2023 could be a challenging year for cotton producers. According to the International Monetary Fund, the global economic slowdown in 2023 is expected to be 2.3%, combined with high inflation worldwide at 6.5%. High inflation is depleting the personal savings rate in the United States to a historically low level, with the most recent data at 2.3%. Globally, 2022 cotton production is projected at 115.7 million bales, above the world cotton mill use at 111.7 million bales (Figure 2). The reduction in economic activity and high inflation in 2023 likely would continue to reduce consumer demand for discretionary items, such as textiles and apparel, thus suppressing cotton prices in 2023. The cotton production profit margin likely would be lower with high input costs and low prices. On a positive note, economic recovery probably could happen during the fourth quarter of 2023, and the winter ice in the cotton market could start to melt during the cotton harvest in 2023.

Cotton Supply and Demand

In 2022, the United States planted 13.6 million acres of upland cotton, the highest in 3 years. However, U.S. harvested acres were only 7.7 million acres, with the overall U.S. abandonment rate for upland cotton at 43.4%, the highest on record. Severe drought conditions hit the largest cotton-production regions including Texas, Oklahoma, Kansas, New Mexico, and Missouri. The abandonment rate for Texas reached 68%. Texas planted

7.9 million acres of cotton in 2022—by far the most of any state—representing 58% of total U.S. planted acres. Georgia planted 1.29 million acres in 2022. With favorable weather conditions, production was estimated at 2.5 million bales. The December 2022 USDA World Agricultural Supply and Demand Estimates (WASDE) report projected U.S. cotton production at 14.2 million bales for the 2022–2023 marketing year, slightly below the U.S. cotton demand, which was 12.3 million bales of exports and 2.2 million bales of domestic mill use. In 2022, the national yield level was 868 lb per acre. U.S. ending stocks are projected at 3.5 million bales in 2022. The U.S. ending stocks-to-use ratio is forecast at 24.2% for the 2022–2023 marketing year.

Interest Rate and U.S. Dollar Appreciation

The Federal Reserve's commitment to bringing inflation back down to its target of 2% likely would result in a 5% or more interest rate through 2023. The rising interest rate further accelerated the appreciation of the U.S. dollar. Cotton is a global commodity; on average, over 80% of cotton produced in the United States is exported. The appreciation of the U.S. dollar increases prices paid by foreign consumers and makes U.S. cotton less attractive. This could result in a further decline in cotton demand from the United States and lower cotton prices for U.S. producers in 2023.

2023 Price Outlook Summary

U.S. cotton acreage and production would be likely to decline in 2023 because of lower relative price expectations with competing crops, such as peanut and corn. As this is being written on December 9, 2022, December futures prices (CTZ23 Dec 23) for the 2023 cotton crop are currently around 78.32 cents per pound. The optimistic likely price for cotton in 2023 is 80 to 85 cents per pound or better, and the pessimistic likely price for 2023 is 69 to 75 cents per pound. For planning and budgeting projections, a price of 72 to 78 cents per pound is suggested for 2023. ■

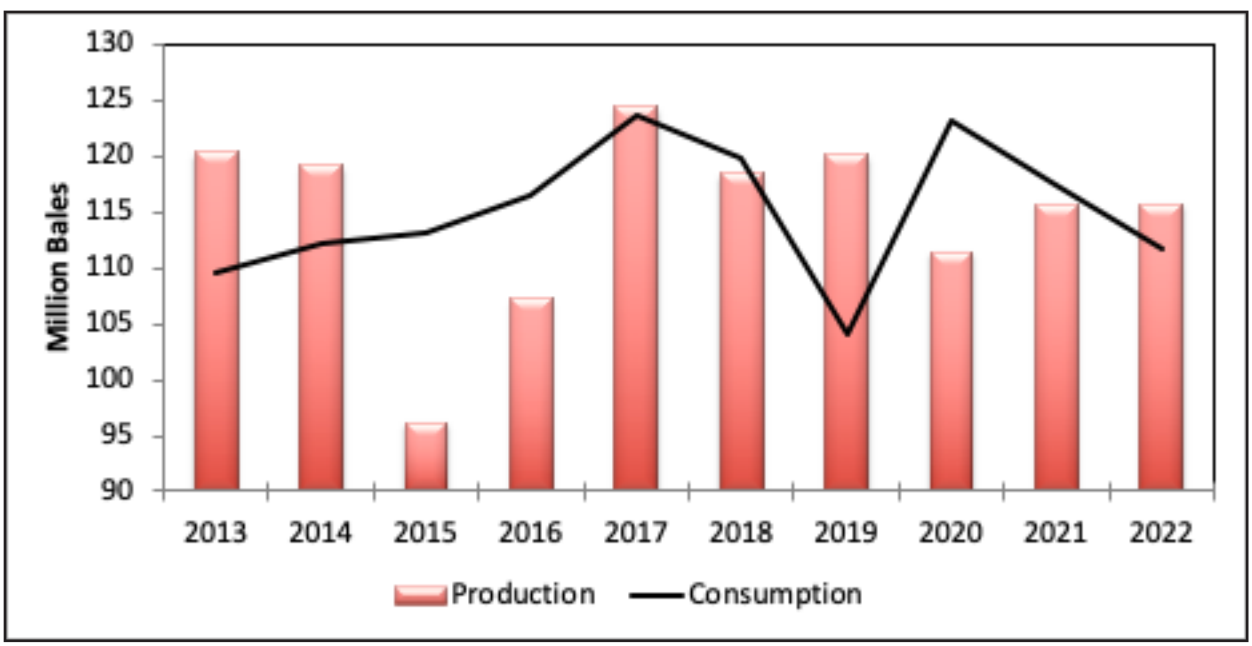
2023 Georgia AG FORECAST
Takeaways

- **Reduction in consumer demand for cotton related products will suppress cotton prices in 2023.**
- **U.S. cotton acreage and production likely will decline in 2023 because of lower relative-price expectations with competing crops.**
- **The cotton production profit margin likely will be lower in 2023 with high input costs and low cotton prices.**

Figure 1. Cotton Cash Prices for the Past Decade

Source: barchart.com

Figure 2. World Cotton Supply and Demand



Data source: USDA FAS

Fruits and Tree Nuts

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Fruits and Tree Nuts

According to the Bureau of Labor Statistics, the producer price index for fruit and tree nuts was relatively much better in 2022 compared to the 2021 crops season. Their report indicated that the producer price index for fruit and tree nuts started strong; it was over 160 (1982=100) in January, climbed to more than 170, and stayed strong thereafter except for a slight drop in March 2022. By August 2022, the PPI was still strong at 170.6, equivalent to 21.9% increase compared to the same time period in 2021 (Figure 1).

Peaches

According to the U.S. Department of Agriculture National Agricultural Statistics Service forecast, the expected 2022 peach production of 583,500 tons was a decrease of 15% compared to 2021 crop season. The decrease in production has been blamed on several factors, including frost and hail in California and freezing temperatures in South Carolina and Georgia. These bad weather conditions affected the three major peach-producing states by reducing fruit yields and overall cosmetic quality.

This significant decrease in peach production contributed to a record-high price, which eventually kept the producer price index strong in 2022. Compared to the 2021 crop season, Georgia and South Carolina experienced 13% and 26% decreases in 2022 season production, respectively. California, the number one peach producer, suffered a 15% decrease. The overall 15% decrease in production was partially responsible for the high price growers received. Any significant increase in production in the 2022–2023 season may negatively impact prices (Figure 2).

Pecans

Bad weather suppressed U.S. pecan production in the 2021–2022 crops season. There was a significant decrease in production in Georgia, which is still ranked as the number one producing state. Since the National Agriculture Statistics Services has suspended the Pecan Production Report, it is difficult to predict actual production.

The U.S. Department of Agriculture report indicated that U.S. pecan exports to China fell 74% in the 2021–2022 crop season compared to the same time period the previous year. The significant decrease in pecan production must have triggered an increase in price, and that could be the reason why there were limited shipments to China in the first quarter of 2022. Furthermore, because of the drought crisis, Mexico's shelled and in-shell pecan exports to the United States decreased by 26% in the 2021–2022 crop period.

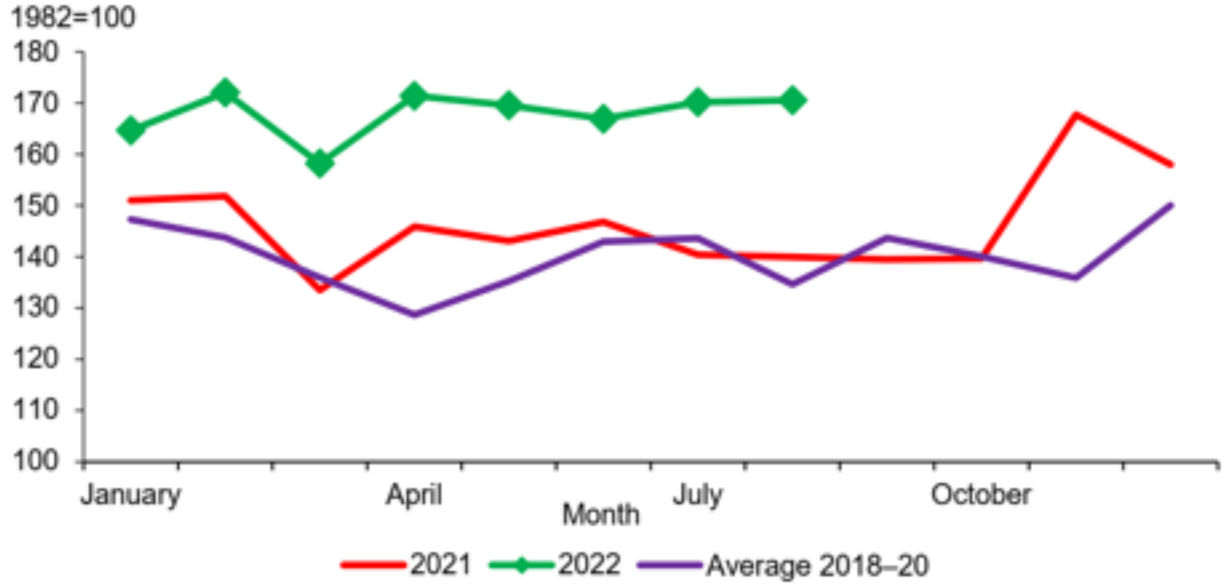
Blueberries

Blueberry prices were relatively high in the first quarter of 2022 when Chile and Peru were the dominant supplier to the United States. Imported fresh blueberries from Chile and Peru increased by 14% and 64%, respectively, in the first quarter of 2022 compared with the same time period in the previous year. Prices for fresh blueberries from Chile were as high as $3 per pound in 2022 compared to $2.50 in 2021. Georgia blueberry exporters received $5–$7 per kilogram, which translates to $2.27–$3.17 per pound depending on the quality. California produces a small quantity of blueberries during the winter months, and there was an increase in production in Georgia, Oregon, and Washington. Florida's and Georgia's production usually starts in mid-March. Blueberries are an important commercial crop in Georgia and still rank second in the fruits and nuts farm gate value category. ■

2023 Georgia AG FORECAST Takeaways

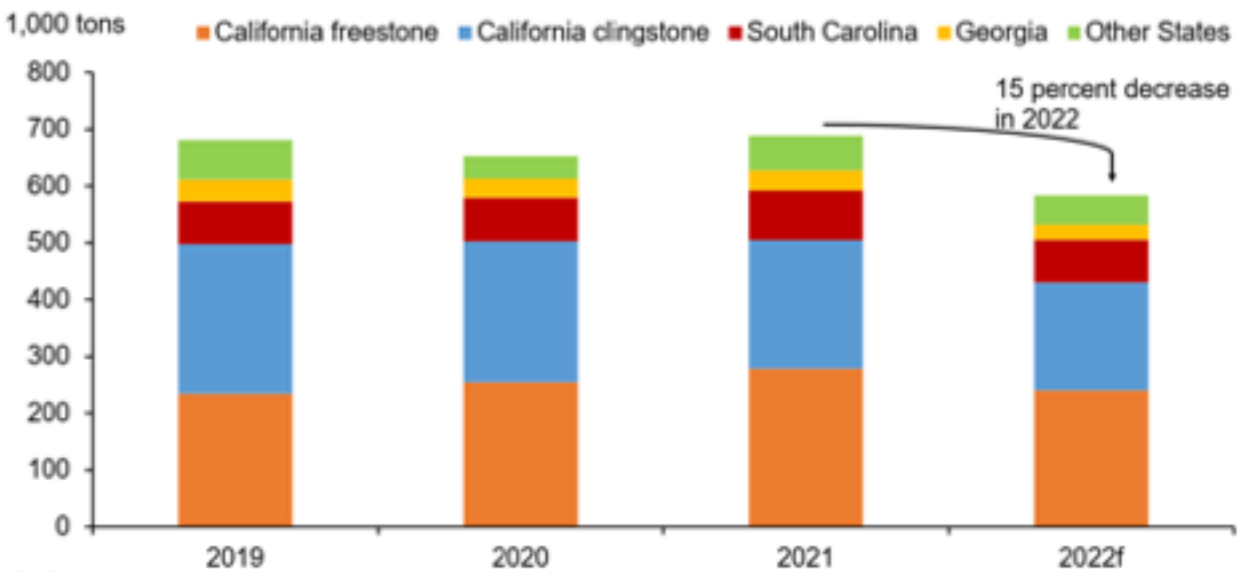
- **The three major U.S. peach-producing states experienced a significant fall in production which cumulatively reduced our 2022 production by 15%. Since it is difficult to predict whether the weather and water shortage that contributed to the decrease in production will persist, chances are that the situation may improve in 2023, but not by much.**
- **The significantly high price received by peach and orange producers was instrumental in maintaining a strong consumer price index in 2022. The producer price index is expected to stay strong in 2023.**
- **In 2023, blueberry imports from Chile, Peru, and Mexico will continue to increase—domestic harvests only get into the market beginning mid-March, and total production is not enough to satisfy high domestic demand.**
- **Georgia pecans will continue to dominate the tree-nut industry in the 2023 crop year and prices are expected to improve, especially if China increases it imports of U.S. pecans.**

Figure 1. Producers Price Index (PPI) for fruit and tree nuts, 2021–2022



Note: Producer Price Index is average prices normalized to 100 in 1982.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Figure 2. U.S. Peach Production Trend, 2019–2022



f = forecast.
Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruit and Nuts 2021 Summary* and *Crop Production* (August 2022 issue).

Vegetables and Pulses

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Vegetables and Pulses

According to the U.S. Department of Agriculture's Economic Research and National Agricultural Statistics services, there was a 7% decrease in vegetable and pulses harvested area in 2021 compared to 2020; 6.3 million acres were harvested in 2021 versus 6.6 million acres in 2020. Several factors, including extreme heat and irrigation water supply, were blamed for the decrease in acreage. Total utilized production also experienced a 1% decrease in 2021 compared to 2020. Despite supply chain disruption and challenges, the total imports of fresh vegetables and pulses increased by 10.2% in 2021 compared to 2020, while total exports also increased by 2.8% in the same time period. It is worth mentioning that the gap between imports and exports keeps widening as total imports were $18.6 billion compared to total exports of $7.5 billion. There was a 2% decrease in total per capita availability; 377.4 lb was recorded in 2021 compared to 385 lb in 2020 (Table 1).

Also, the growers price index for fresh-market vegetables declined by 6% in 2021 compared to 2020. For instance, the free-on-board prices for sweet corn in the first quarter of 2021 were relatively higher than in 2020 until May, when it dropped below the 2020 record. However, fresh tomatoes, carrots, cauliflower, and onion prices per pound were sluggish in 2021 compared to 2020, contributing to the decrease in the prices that growers received.

Horticultural crop producers experienced an unprecedented input price increase in the first quarter of 2022. Some of the factors being blamed for skyrocketing input prices are supply chain disruption, post-COVID pandemic surge, transportation, imposed duties on fertilizers, insufficient crude oil inventories, and the war between Ukraine and Russia. According to an April report from the U.S. Department of Agriculture Economic Research Service, "Energy and energy-based manufactured inputs account for about one-fourth of the production expenses of specialized vegetable farms. With energy costs up substantially, the vegetable production sector paid at least 16 percent more for the inputs required to produce, pack, and ship vegetables in the first quarter of 2022."

For instance, Table 2 shows that potassium/phosphate fertilizer prices increased by 70.8% in the first quarter of 2022 compared to the same period in 2021, while diesel fuel increased by 100.4%. On the other hand, gasoline prices increased 94% while nitrogen fertilizer increased by 107.6%. ■

2023 Georgia AG FORECAST
Takeaways

- **Although the total U.S. fresh vegetable and harvested area decreased by 7% in 2021 compared to 2020, the harvested area is expected to improve in 2023—but not enough to offset 2021.**
- **Total vegetables and pulses imports were $18.6 billion in 2021, an increase of 10.2% compared to 2020. This import trend is expected in 2023 despite the supply chain disruption.**
- **Production input prices will continue to fluctuate depending on the situation in the Ukraine and Russia war. It's likely that prices will continue to escalate if the U.S. government does not come up with a contingency plan.**

Table 1. U.S. Vegetable and Pulse Industry Trend, 2019–2022

Item	Unit	2019	2020	2021	2022/2	Percent change 2021–22
Area harvested						
Vegetables, fresh and processing/3	1,000 acres	2,199	2,141	2,131	1,734	-18.6
Potatoes	1,000 acres	937	912	924	906	-1.9
Dry beans, dry peas, lentils, and chickpeas/4	1,000 acres	3,050	3,395	3,070	3,054	-0.5
Mushrooms/5	1,000 acres	3	3	*3*	*3*	-10.6
Total	**1,000 acres**	**6,189**	**6,451**	**6,127**	**5,697**	**-7.0**
Production						
Vegetables fresh/3	Million cwt	297	288	275	274	-0.5
Vegetables processing/3/7	Million cwt	352	354	339	335	-1.1
Potatoes	Million cwt	424	420	410	397	-3.2
Dry beans, dry peas, lentils, and chickpeas/4	Million cwt	55	66	37	45	20.5
Mushrooms	Million cwt	9	8	8	8	-7.2
Total	**Million cwt**	**1,137**	**1,135**	**1,069**	**1,058**	**-1.0**
Imports/7						
Vegetables fresh	$ millions	8,511	9,523	10,008	10,448	4.4
Vegetables processing/6	$ millions	3,258	3,644	3,932	4,525	15.1
Potatoes (including seed)	$ millions	1,529	1,734	2,019	2,524	25.0
Dry beans, dry peas, lentils, and chickpeas/4	$ millions	236	315	355	443	25.0
Mushrooms	$ millions	467	502	595	687	15.5
Total	**$ millions**	**14,002**	**15,718**	**16,908**	**18,628**	**10.2**
Exports/7						
Vegetables fresh	$ millions	2,393	2,307	2,398	2,479	3.4
Vegetables processing/6	$ millions	2,196	2,038	2,255	2,388	5.9
Potatoes (including seed)	$ millions	1,925	1,675	1,873	1,967	5.0
Dry beans, dry peas, lentils, and chickpeas/4	$ millions	620	782	734	631	-14.0
Mushrooms	$ millions	44	42	41	39	-3.9
Total	**$ millions**	**7,178**	**6,844**	**7,301**	**7,505**	**2.8**
Per capita availability						
Vegetables fresh	Pounds	149.2	148.0	146.3	144.9	-1.0
Vegetables processing/6	Pounds	113.1	123.1	112.3	106.9	-4.7
Potatoes	Pounds	112.6	115.0	112.9	112.5	-0.4
Dry beans, dry peas, lentils, and chickpeas/4	Pounds	9.8	12.7	9.9	9.5	-3.7
Mushrooms	Pounds	3.8	3.7	3.7	3.7	-1.2
Total	**Pounds**	**388.5**	**402.6**	***385.0***	***377.4***	**-2.0**

Note: Hundredweight (cwt) = 100 pounds.
1/ Total values rounded. Area and production prior to 2019 include several States no longer in the annual NASS estimates program.
2/ The values for 2022 vegetables and mushrooms are USDA, ERS forecasts while area harvested and production values for potatoes and pulses are preliminary.
3/ Utilized production excluding melons.
4/ Includes Austrian winter and wrinkle seed peas where applicable.
5/ Mushroom area equals Agaricus total fillings (multiple mushroom crops).
6/ Includes canned, frozen, and dried. Excludes potatoes, pulses, and mushrooms.
7/ All international trade data are expressed on a calendar year basis.

From "Vegetable and Pulse Outlook: December 2022," by W. V. Davis, C. Weber, G. Lucier, and S. R. Skorbiansky, 2022, p. 3 (https://www.ers.usda.gov/webdocs/outlooks/105511/vgs-369.pdf?v=9945.6).

Table 2. Trend in production input prices paid by growers, 2016–2022.

Input	Annual average						First quarter (Jan.–Mar.)		
	2016	2017	2018	2019	2020	2021	2021	2022f	Change [1]
	------------------------ Index, 2011 = 100 ----------------								Percent
Seeds and plants	121.4	119.9	118.5	116.0	113.4	113.1	113.0	118.0	4.4
Fertilizer, nitrogen	71.6	66.5	66.5	71.4	69.2	87.4	68.8	145.0	110.8
Fertilizer, potash/phosphate	70.5	64.4	62.9	63.0	62.5	82.7	64.4	110.0	70.8
Chemicals, insecticides	107.7	103.1	100.9	99.2	93.4	96.4	92.2	106.0	15.0
Chemicals, herbicides	109.7	106.4	101.7	101.8	99.4	99.9	95.7	110.0	14.9
Chemicals, fungicides/other	98.7	95.1	95.7	99.5	98.8	98.1	94.2	112.0	18.9
Fuels, diesel	51.8	57.6	67.4	71.5	56.4	55.0	49.9	100.0	100.4
Fuels, gasoline	59.0	64.5	70.9	75.1	60.6	64.0	56.0	110.0	96.4
Farm machinery	115.4	117.7	120.0	124.1	123.1	131.8	123.8	145.0	17.1
Farm supplies	106.3	107.6	111.6	115.5	117.4	127.5	120.4	135.0	12.1
Custom services	111.6	114.3	113.3	118.4	119.6	114.7	114.7	126.0	9.9
Buliding materials	107.6	110.4	116.1	118.1	120.8	140.5	129.0	157.0	21.7
Cash rent	130.4	130.4	126.0	123.0	124.5	124.5	124.5	126.0	1.2
Interest	103.9	108.3	114.7	115.1	110.9	111.4	111.4	115.0	3.2
Taxes	110.7	115.5	117.1	120.4	126.8	130.0	130.0	135.0	3.8
Wage rates	115.9	119.1	126.3	133.2	138.2	146.1	144.9	152.0	4.9
Crop sector [2]	106.6	108.0	110.2	111.7	111.3	116.0	112.1	127.0	13.3
Vegetable sector [3]	106.1	107.2	109.8	113.1	113.2	118.4	114.6	132.3	15.5

Note. f = forecast. 1 = First quarter (January—March) change from 2021–2022. 2/ Input items common to crop production. 3/ Input items common to vegetable production weighted by 2006 vegetable farm expenses derived from the 2006 Agricultural Resource Management Survey.

From "Vegetable and Pulse Outlook: April 2022, VGS-36, April 29, 2022
USDA, Economic Research Service

Corn, Soybean and Wheat Outlook

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For many corn, soybean, and wheat producers, 2022 was a profitable year because of high grain prices. Several factors contributed to high grain prices, including high inflation, rising global demand, a lower than expected South American crop, and tight supply because of the Russia-Ukraine war. Before the war started, Ukraine was the fourth-largest corn-exporting country and the fifth-largest wheat-exporting country in 2021.

Looking ahead to 2023, volatility reflects uncertainty for grain producers regarding lower price expectations and high input costs. The profit margins for grain producers in 2023 likely will be lower. The continued strength of the U.S. dollar increases the cost of U.S. grain relative to competitors. As a result, export demands for U.S. grains have softened, which could lower the price expectancy in 2023.

Corn

The United States planted 88.6 million acres of corn in 2022, which was the lowest number of acres planted in the past decade. Lower U.S. corn yield was predicted in 2022 at 172.3 bushels per acre. Total U.S. corn production in 2022 is projected at 13.9 billion bushels, 1.1 billion bushels lower than in 2021. The lower production resulted in a tighter U.S. corn supply and lower ending stocks. Projected ending stocks for the 2022–2023 marketing year are 1.3 billion bushels, the third lowest of the past decade. U.S. corn exports are important in determining farm-level prices. For the 2022–2023 marketing year, around 2.07 billion bushels of U.S. corn are estimated to be exported to foreign markets. As the second-largest importer of U.S. corn, Mexico's plan to ban genetically modified corn from the United States likely will put some risks on exports. Georgia growers generally see a positive basis for corn. Based on futures prices and a positive historical basis for Georgia, expected corn prices in Georgia likely will be around $6.50 per bushel.

Wheat

With the United States accounting for around 7% of world wheat production, supply and demand globally will largely influence the price of wheat domestically. The Russia-Ukraine war puts a significant risk on the world's wheat supply. Wheat prices rose sharply after the war broke out in 2022. However, the global wheat supply shortage was relieved temporarily after the Black Sea Grain Initiative was extended in November 2022 to help Ukraine export its agricultural products. For 2023, the world wheat supply will continue to be tight. World wheat production is projected up slightly in the 2022–2023 marketing year to 28.7 billion bushels, which is 110 million bushels short of projected demand at 28.8 billion bushels. World wheat ending stocks are estimated at 9.8 billion bushels, the lowest since the 2016–2017 marketing year.

U.S. and Georgia wheat production have trended down over the past decade and drought in the United States had a negative impact on wheat yields the past 2 years. Production for the 2023 crop is projected to be 1.65 billion bushels, the second lowest over the past decade. Planted wheat acres in the United States are down about 1 million acres from 2022 to 45.7 million acres in 2023. Ending stocks are projected to be just under 570 million bushels, the lowest value seen in a decade. Georgia farmers are estimated to have planted 200,000 acres, 10% fewer than last year. Georgia growers generally see a negative basis for wheat. Based on futures prices and a negative historical basis for Georgia, expected wheat prices in Georgia would likely be around $7.50 per bushel.

Soybeans

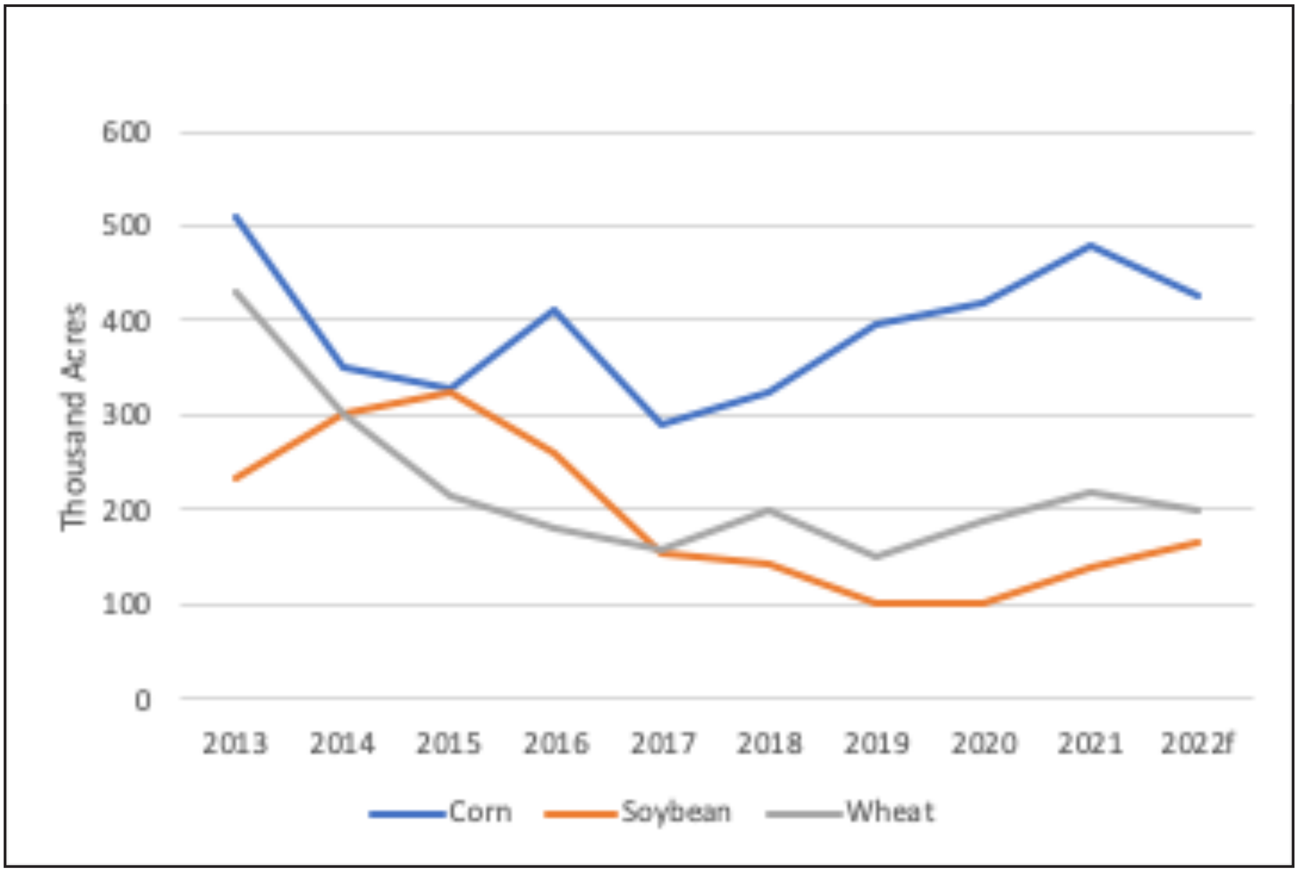
U.S. planted acres of soybeans in 2022 were up slightly to 87.5 million acres. This was driven largely by favorable prices during the planting season relative to corn. However, yields are projected to decline to 50.2 bushels per acre. At this level, the U.S. soybean crop is estimated to be 4.35 billion bushels. On the usage side, soybean crush was up to 2.2 billion bushels, and exports were down to 2.0 billion bushels, leaving the total soybean use down slightly to 4.4 billion bushels. U.S. ending stocks continued to be tight in 2022, at 220 million bushels, the lowest since the 2016–2017 marketing year. The low ending stocks indicate the United States may need a larger supply of soybeans. Ending stocks are expected to increase in 2023, particularly if we see weaker exports and average weather conditions. Higher ending stocks may lead to softer soybean prices. Georgia growers generally see a positive basis for soybeans. Based on futures prices and a positive historical basis for Georgia, expected soybean prices in Georgia likely would be around $14.40 per bushel. ■

2023 Georgia AG FORECAST Takeaways

- **The Russia-Ukraine war and Mexico's plan to ban genetically modified corn from the United States will increase uncertainty regarding corn prices.**
- **The United States and the world will continue to have a tight wheat supply in 2023, supporting higher than average wheat prices.**
- **The low ending stocks of U.S. soybeans indicate the need for more soybeans. Ending stocks might improve in 2023, leading to softer soybean prices.**

Corn, Soybean and Wheat Outlook, continued

Figure 1. Georgia Planted Acres of Corn, Soybeans and Wheat 2013–2022



2023 Beef Cattle Outlook

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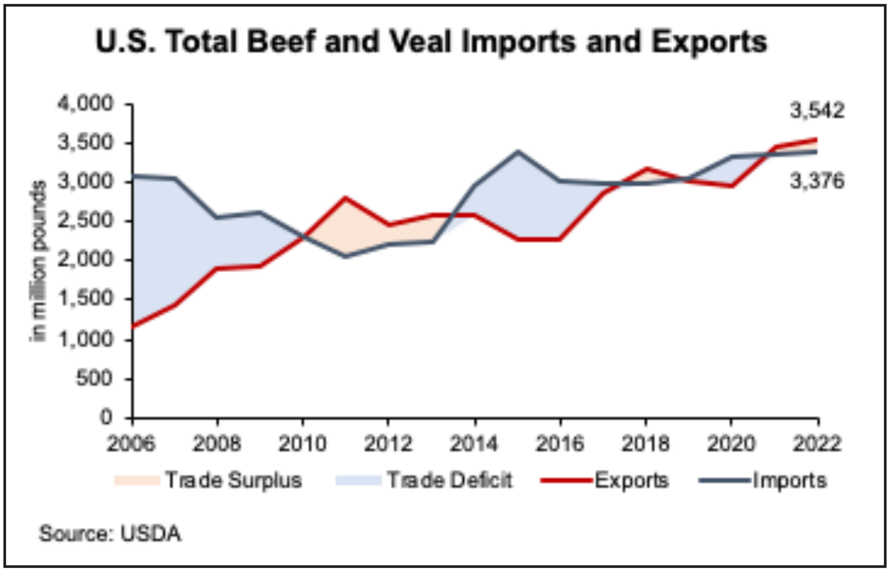
Nicole Wang, Food and Agribusiness Analyst, Truist Bank

In 2022, we experienced a fast recovery from the pandemic. As everything goes back to normal, external factors such as weather and personal preferences have been impacting the beef cattle industry significantly. Severe drought conditions in the Western and Southern U.S. caused more rapid cow slaughter, which leads to tighter supplies of cattle and higher cattle prices. An increase in per capita consumption of beef will impact the beef cattle industry positively while also encouraging consumers to seek other alternatives.



For more than 2 years, the Midwest, Southwest, and Western states have suffered from what might be the worst drought ever recorded, brought on by a lingering La Niña cycle that is entering its 3rd year. This effect pushes the jet stream northward which typically causes drought in the Southern states. This drought crept into the Midwest. In November, the U.S. Drought Monitor reported that 85% of the country is experiencing some level of drought. According to the USDA World Agricultural Outlook Board, about 76% of the U.S. cattle herd is raised in drought areas. As a result of the drought, ranchers struggled to sustain all the cows in their herds as the grasslands dried up. Older cattle were brought to the market. Because of the rapid cow slaughter in early 2022, beef production for 2022 increased 211 million pounds to 28.3 billion pounds. As the year closes out, we will start 2023 with herd numbers in the South possibly down as much as 5%. This would be a decrease in the herd not seen since the mid-80s (Muhammad, 2022; U.S. Department of Agriculture, 2022). Fewer cows are expected to be slaughtered in the fourth quarter of 2022 and that trend will continue into next year. Projected beef production in 2023 will be lower by 90 million pounds to 26.3 billion pounds, a decline of more than 7% (Knight et. al., 2022). With lower cattle supplies, packers are likely to pay higher prices for slaughter-ready cattle in 2023, and feedlot operations are likely to limit their spending because of the increase in operating costs from a year ago. Based on current price data and expected demand next year, 2023 fed steer prices are projected $2 higher in the first half and $4 higher in the third quarter, raising the annual forecast by $2 to $156 per hundredweight (Knight et. al., 2022). We do expect conditions on the ranch to improve as forecasters are predicting a break in the La Niña cycle in the first quarter of 2023.

Based on the USDA's outlook report, the U.S. beef export forecast for the fourth quarter of 2022 has been lowered by 10 million pounds to 850 million based on recent trade data and lower expected exports to Asia. The 2022 annual forecast is 3.542 billion pounds, and the 2023 annual forecast is unchanged at 3.070 billion pounds. On the other hand, China's demand for beef is increasing and imports have increased to a record high in recent years. Ever since China and the United States signed the Phase One Trade Agreement in January 2020, China reopened its market to the United States and U.S. beef exports to China grew to $1.6 billion in 2021 (Muhammad, 2022). In 2022, exports to all major destinations except China have decreased and China's demand for U.S. beef will continue to grow in 2023. One possible factor in China's growing demand is that Chinese consumers are moving away from consuming pork because of increased personal income and a pork shortage caused by African swine fever.

As we look beyond 2023, the personal income and demand for protein will increase in the United States. Per capita consumption of beef is projected to increase at a rate of 0.3% every year moving forward. Growing attention to environmental and health concerns are leading to a rapidly growing interest in plant-based meat alternatives. Plant-based protein uses 89% less land in its production cycle than regular beef, according to a report by Frontiers Media, which gives plant-based protein a perceived smaller environmental footprint. The big gap is still the flavor. To better adapt to the evolving consumer demand for sustainability and healthy food, the beef cattle industry is expected to embrace health-oriented products with ethical labels, such as organic and grass-fed beef (Lee, 2022). Beef still will be a staple in Americans' diets even as interest in protein alternatives grow. For ranchers and producers, being transparent around animal welfare and the production process will pay dividends as consumers move toward those brands.

2023 Beef Cattle Outlook, continued

2023 Georgia AG FORECAST

Takeaways

- Severe drought elevated cow slaughter in 2022. With fewer cows to slaughter in 2023, cattle prices are expected to increase.
- China could become the largest export destination for U.S. beef in 2023.
- As per capita beef consumption grows, there also will be a growing interest in plant-based alternatives.

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2023 Pork Outlook

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The pork industry in the United States has seen market expansion since the early 2000s for commercial and domestic purposes. A boost in production in recent years has been tied to an increase in U.S. consumer preference for protein. In 2021, pork price was determined mostly by pandemic-related changes in consumer demand. However, in 2022, higher pork prices were due to supply factors.

The pig cycle is the expansion and contraction of hog inventory reacting to economic forces. When prices and margins stay elevated, farmers likely will increase production. Ultimately with higher production, prices will drop, which causes the farmers to lower their production. In 2022, farmers lowered their pork production in the first three quarters because of lower pork prices than the previous year. According to the USDA, 2022 pork production is expected to be 2.2% lower because of a reduction of available slaughter-ready hogs. For 2023, pork production is expected to grow 0.7% as the number of slaughter-ready hogs increases. The USDA is forecasting the 2022 average pork price at $71.08/cwt and the 2023 price at $67/cwt (Knight et al., 2022). Besides production, another indicator of pork price is the input cost of raising pigs. Feed price is expected to decline in 2023 and this is good news for the farmer as feed is a significant component of input cost (Curran, 2022).

Figure 1. African swine fever heat map in Asia; outbreaks are reported around China.

The U.S. pork market is characterized by substantially more exports than imports. The USDA is predicting pork exports will be down 9.1% this year and down an additional 1.7% next year. Specifically, the USDA forecast for 2023 pork exports is around 6.3 billion pounds. During the first 8 months of 2022, U.S. pork exports were down 14.8% with 82% of the decline as a result of less pork shipped to China. With the exception of Mexico, the Dominican Republic, Colombia, and South Korea, all other major foreign buyers bought less U.S. pork than in January–August 2021. China's import demand for pork soared in 2019 because of the lack of supply caused by African swine fever (ASF) in 2018. As China's pork production came back online in 2021, China decreased its pork imports. Another factor for the decrease in U.S. pork export demand is the appreciating value of the U.S. dollar. In 2022, countries that traditionally imported pork from the United States turned to other countries, such as Brazil and those within the EU, to meet their pork demands (U.S. Department of Agriculture, 2022). However, we already are seeing a decline in the strength of the U.S. dollar. This coupled with a lifting of restrictions around China's Zero-COVID Policy and recent new spread of ASF will continue to impact production. U.S. pork exports should see higher demand in the next few years.

Overall, the current market trends point toward a promising 2023, which is good news for farmers and producers. Pork demand has the potential to be unpredictable as ASF still is impacting production in Asian countries. In addition, the lack of transparency from China makes it difficult to determine the extent of the impact of ASF on their hog population. It is crucial for farmers to be aware of and prepared for changing consumer trends. As we look to the future, as with the beef industry, environmental concerns and consumer preferences have led to growing interest in how the animals are raised and the feed they consume. For many consumers transparency is no longer an option—it is a requirement—and they are willing to pay a premium to ensure they get it. ■

2023 Georgia AG FORECAST Takeaways

- **2022 U.S. pork prices continue to increase because of the limited number of slaughter-ready pigs.**
- **Good outlook for 2023 as feed prices likely decrease and export demand increases.**

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2022–2023 Commercial Poultry Outlook

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Despite continued high feed prices, commercial poultry companies have had a good year in 2022. The composite, or average price, for chicken has currently stabilized down from record levels but may stay high well into the spring of 2023. Sustained inflationary pressure and the continued talk of recession, combined with the higher prices of beef and pork will continue to push consumers toward chicken, shoring up demand. Responding to the high demand and price, companies are striving to provide a strong supply of chicken. For the most part it seems they are succeeding—production has ramped up and an ample quantity of chicken can be found on most store shelves. These efforts should help moderate prices if the supply chain stays intact. Rail-transport labor troubles could send a shockwave throughout the poultry industry, and indeed the protein industry overall, as a high percentage of feed ingredients are transported via rail.

Highly pathogenic avian influenza (HPAI) remains a top concern for commercial poultry. The commercial egg and turkey sectors have suffered the most in 2022. Losses this year have now exceeded the previous high of 5.4 million total head from 2015. A late reported outbreak in a Southeastern commercial breeder flock is concerning for the "broiler belt" going into the winter. Further breaks in broiler operations, particularly in dense production areas, could disrupt domestic supply and give export customers a reason to disallow U.S. chicken into their overseas markets, stifling a currently robust trade market.

HPAI's impact on the table egg markets has been substantial. Table egg prices started the year at slightly above 2021 at $1.00 per dozen and ended the year just above $4.00 per dozen. HPAI's continued presence may help keep prices up and supply tight. Table egg demand has been above baseline for the last half of 2022, while eggs processed have been below 2021 for the same period. The Supreme Court case concerning California's Proposition 12 ruling could have significant implications going forward as producers' ability to market traditional caged layer eggs could be impacted.

Hindering the efforts to expand production is the ever-increasing cost of new housing combined with increasing interest rates. It is becoming almost impossible for new growers to secure financing for new farms without heavy cash incentives from integrators combined with governmental loan guarantees. It is questionable whether integrators can sustain housing incentives long-term. One growing trend is investment capital groups building and/or purchasing large farms with large numbers of houses and operating them using hired management and labor. This model bypasses the equity problem and gets chickens to the plant, but represents a departure from the traditional family-farm model that has been the staple of the contract poultry farm. The long-term outlook is unknown for such operations, and it is unknown whether these groups will retain ownership and continue to operate the farms past the depreciation period.

For growers, the recent merger of Wayne-Sanderson under the Cargill umbrella holds particular interest. As part of the Federal Trade Commission's ruling, spurred by a lawsuit by the Department of Justice filed in July 2022, the competitive pay system (also known as "tournament pay") was disallowed and Wayne-Sanderson was directed to modify the pay system for broiler growers. They may follow the patterns of other companies that have already modified their grower pay. One such new pay system sets a base pay per pound of delivered birds to the plant and allows for small increases based on performance resulting in several thousand dollars of potential increase in pay per flock. Another system guarantees a percentage of the total pay on a square-foot basis, while leaving a significant portion as a performance-based bonus paid per pound of birds delivered to the plant. The main difference in these systems from the traditional tournament system is that most of a grower's pay does not change regardless of their individual performance or live cost.

2023 Georgia AG FORECAST

Takeaways

- **The domestic chicken market is strong with a good supply in the short- to midterm, though highly pathogenic avian influenza (HPAI) continues to loom large in the United States and could be a major impact in 2023.**
- **High building costs an increasing interest rates are obstacles to expansion on the live side.**
- **Future changes to the contract-grower pay model could be beneficial to growers, but caution is warranted.**
- **HPAI and California Proposition 12 ruling likely to have an impact on future table egg prices.**

The new Wayne-Sanderson has complexes that overlap with other integrators where competition for growers exists. It could be expected that if a new payment program proves successful, other integrators may be forced to change their pay programs to compete for growers. For growers considering such opportunities, they must look at not only their current revenues but also at what the potential pay programs would allow or guarantee. Depending on where the new pay falls in comparison to what is possible under their current system, growers historically receiving better-than-average tournament pay may experience a decline in revenue. Figure 1 illustrates how performance pay incentives can have significant impact on a farm's net income. I would not expect guaranteed per-pound pay rates to be set very close to the highest pay rates possible in most traditional tournament systems.

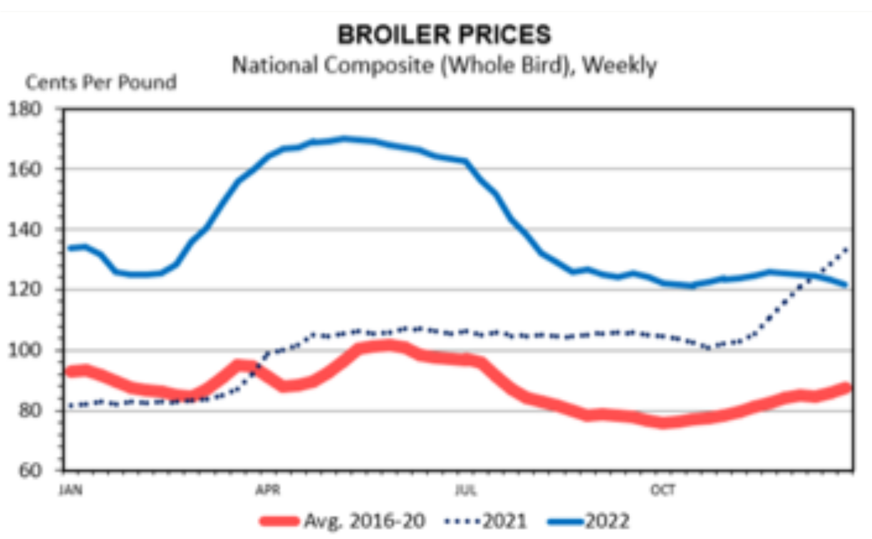
Figure 1. Comparison of income on two farms with differences in performance pay incentives.

Broiler Farm Income Estimates	2 - 66' X 600'	
	Farm "A"	Farm "B"
Total Square Footage	72,000	72,000
Gross Revenue per SF ($$ per lb annualized)	$ 2.75	$ 3.25
Gross Revenue	$ 198,000.00	$ 234,000.00
Variable Expenses	$ (69,300.00)	$ (58,500.00)
Income Before Debt Service	$ 128,700.00	$ 175,500.00
Debt Service Assignment (50%)	$ (99,000.00)	$ (117,000.00)
Annual Net Farm Income	**$ 29,700.00**	**$ 58,500.00**
ANFI per SF	$ 0.71	$ 1.39

Note. Farm A and B represent two scenarios for broiler farms with a $28,800 total increase in annual farm income for Farm B. Only $10,800 of that increase is from lower expenses, or "efficiency" improvements. The other $18,000 (62%) in additional income is the result of performance pay, both in increased pay rate and increased pounds. According to where a guaranteed pay rate falls, this total revenue increase seen in Farm B may or may not be available to a grower in a noncompetitive pay system.

There has been some discussion of broiler growers wanting to be paid on a simple per-square-foot basis without a production component or performance incentive (resembling contract-breeder pullet pay). While this would solidify a more consistent revenue for growers, one concern is companies could increase bird placement and weights and decrease downtimes, thus maximizing pounds per square foot during favorable markets without necessarily having to increase pay for growers. However, as pounds per square foot increase through the houses, expenses increase for the grower. Without a production component based on pounds going out the chicken-house door, growers easily could get the short end of such a deal. Having at least some of their income based on pounds delivered is the only way to ensure any increased expenses related to production increases could be offset. At the same time, integrators have some concern that setting a constant base pay without production incentives could breed complacency among the growers, and consequently increase overall live cost to the company through resulting inefficiencies. Some mixture of pay per square foot combined with some pay per pound could help offset these concerns. ■

Figure 2. Weekly average price for broilers, 2021–2022, compared to the average of 2016–2020.



Note. Poultry prices rose above long-term averages in the spring of 2021 and sustained that high level, peaking in early summer 2022. It is expected that supply and demand forces of both poultry and competing proteins will keep poultry demand high. However, fast increases in production/supply pushed prices down at the end of the year. Source: USDA-AMS 2022.

Honey Bees 2023

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Georgia's 2022 honey season yielded lower output overall, but some regions and sources experienced above-average production. Colony loss was slightly higher than 2021 but was average when compared to other beekeeper losses across the United States. Demand for Georgia bees, queens, and equipment was much lower than 2021.

The 2022 annual breakdown of Georgia's honey yields, pricing and other issues facing beekeepers in the state:

There are four different types of honey produced in Georgia: sourwood, tupelo, gallberry, and wildflower. In the past, gallberry honey has been one of Georgia's most abundant honey crops, but pure gallberry yields were extremely low for 2022. Gallberry honey in 2022 contained ample amounts of other nectar sources such as holly, red bay, and saw palmetto. Pure gallberry honey is classified as "white" in color; because of the other nectar sources this year, it was rated at an "extra light amber." Weather was partly to blame for the below-average yields, but habitat deterioration where gallberry thrives is becoming more of an issue each year. Because of its light color, slow rate of crystallization, and pleasant flavor, it is still a great honey for blending and a favorite among consumers. Wholesale pricing in 2022 was $2.80 per pound, which is higher than previous years. The demand for early spring honey by packers nationally was responsible for driving up the price.

Wildflower nectar flows in the North were once again above average. Commercial beekeepers were pleased to have colonies produce more honey than usual in the North Georgia mountains. But just like 2021, Middle to South Georgia wildflower yields were far below average. Wholesale prices for wildflower honey in 2022 were much higher than 2021, averaging $3.25–$3.70 per pound. The demand from consumers for local honey is on the rise and is responsible for driving up prices. Local honey in some regions is averaging $4.20 per pound wholesale.

Sourwood nectar flows varied once again, depending on region. The Southern region where sourwood flourishes experienced higher-than-average yields, while the Northern region made little to no honey. Sourwood is produced in the mountains of North Georgia and Western North Carolina. Sourwood located in the Southern mountainous region bloomed mid- to late June. Weather during that time was still warm and dry, and bees were able to forage and collect the nectar. The Northern locations began to bloom in July, just after the rain set in for weeks. Bees were stuck in the hives during the bloom period, unable to forage for nectar. Year to year, sourwood can be unpredictable. This year, because of the lower-than-average overall amount of sourwood produced, some producers opted to not sell at a wholesale price. When wholesale pricing was available, it averaged around $7.50 per pound.

Yields of tupelo honey were once again extremely poor for 2022. Rain at the wrong time contributed to the lower yields, along with a decrease in trees because of habitat destruction. Wholesale prices for tupelo honey averaged around $6–$7.50 per pound.

Reports of colony failure were higher than last year with some commercial operations experiencing a 60%–70% loss. Backyard beekeepers continue to show extreme losses as high as 80%. The number one reason honeybee colonies die is because of an ectoparasitic mite, *Varroa destructor*. This is an issue not only in Georgia but also worldwide. If colonies were not treated aggressively and multiple times per year to reduce mite populations, colonies died. Backyard beekeepers sometimes don't have the knowledge or expertise to deal with such a formidable pest, which is why this sector is seeing consistently higher losses. Even commercial beekeepers, who have been keeping bees for decades, are having difficulty dealing with this parasite. Additionally, mites are developing resistance to miticides that commonly have been used over the years, and there are few to no alternatives available.

Because of the year-to-year fluctuations in nectar flows, starvation continues to be the number two reason bees die in Georgia. If beekeepers take too much honey and are not feeding, or plan not to feed, colonies will surely starve. Pure cane sugar is recommended as a food source and can be fed to colonies in a 1:1 sugar solution.

Demand for queens, packages, and nucleus colonies (nucs) was down significantly for 2022 compared to 2021. The cost to start a hive, around $400, may be a deterrent to most people during times of economic stress. Prices in 2023 remain steady with a 3-lb package of bees and a queen averaging between $100–$130 per package. Nucleus colonies, complete with bees, brood, honey, pollen, and a queen, range from $175–$250 depending on location and when the bees will be ready for sale. Each queen is expected to fetch $28–$40 during 2023.

Even with the decrease in demand for bees and queens in Georgia, local clubs and the Georgia Beekeepers Association are still going strong and have returned mostly to in-person meetings.

2023 Georgia AG FORECAST Takeaways

- **Honey production overall for 2022 was below average for the state. However, in some regions yields of two types of honey, northern wildflower and sourwood, were above average.**
- **Colony losses for commercial operations were higher than 2021, with some reporting a 60%–70% loss, and backyard beekeepers in some cases experiencing losses above 80%.**
- *Varroa destructor* **(parasitic mites) remains the leading cause of colony loss in Georgia and nationally.**
- **Demand for packages, nucleus colonies, and queens were down for 2022.**

Timber Situation and 2023 Outlook

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The current U.S economic outlook is more subdued compared to last year, despite positive signs in key areas. The largest concern in 2022 is surging inflation. Although CPI values came in lower than expected in November, inflation remains up (+7.7%) year-over-year (U.S. Bureau of Labor Statistics, 2022a). Real GDP rebounded in Q3, increasing at a 2.6% annualized rate. This comes after two consecutive quarters of declines in Q1 and Q2 (U.S. Bureau of Economic Analysis). One encouraging aspect of the current economic situation is the resiliency of the labor market. Over 1.1 million jobs were added in Q3, and unemployment declined to 3.6%, representing the lowest unemployment level in over 50 years (U.S. Bureau of Labor Statistics, 2022b). Additionally, supply chain issues, a key factor in driving inflationary trends, are dissipating. The New York Fed's Global Supply Chain pressure index declined 72% from a peak in December 2021 (Federal Reserve Bank of New York, 2022).

In contrast to a torrid 2021, housing activity is showing signs of tapering towards the end of 2022. Housing starts are forecast to reach 1.56 million starts for 2022, down 2.7% from 2021 actuals (Forisk, 2022b). In October, housing starts were at a seasonally adjusted annual rate (SAAR) of 1.425 million units, down 8.8% year-over-year. The SAAR of starts fell 21% after their peak in April. This same pattern also is observed in housing permits and completions. Housing completions fell 6.4% in October, to a SAAR of 1.339 million units, while permits fell 2.4% (U.S. Census Bureau, 2022). Despite short-term expectations of a decline in housing, the components of underlying housing demand—based on demographics, household growth, second-home ownership, and net replacement level of existing housing stock—remain favorable (Forisk, 2022b). The United States still faces a housing deficit after years of underbuilding. Evaluations of the magnitude of the housing shortage vary, although a report by Fannie Mae on the local nature of the housing shortage estimates this at 4.4 million units across the top 75 metropolitan markets (Betancourt et. al., 2022).

Commodity Prices

Commodity prices were mixed and vary by end-product. Softwood lumber prices fell in Q3 after approaching near-record levels in March. Random Lengths Southern Pine Composite price closed Q3 2022 at $517 per thousand board foot (mbf). This represents a $73 (+16%) year-over-year increase from close of Q3 2021. Additionally, the Random Lengths Framing Lumber composite closed Q3 2022 at a price of $536 per mbf, a $104 (+24%) year-over-year increase (TimberMart-South, 2022).

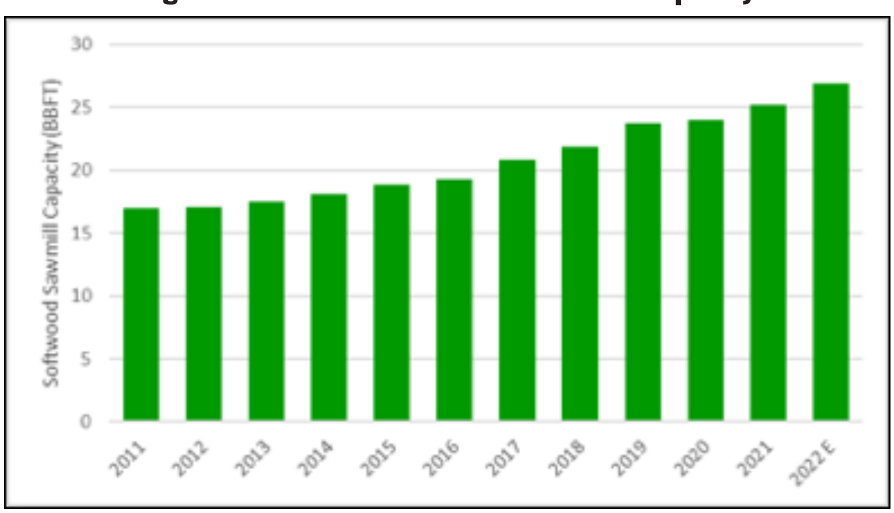
2023 Georgia AG FORECAST
Takeaways

- **Inflation remains a persistent challenge.**
- **Housing activity is beginning to moderate.**
- **U.S. South softwood lumber market share is increasing along with production capacity. Plentiful timber supplies and capital expenditures are positives.**

Prices for ***virgin fiber*** pulp products—which do not contain any recycled material and come directly from the pulp of trees or other plant materials—continued their climb in 2022. Prices for recycled pulp products began falling at the end of 2021 and continued to decrease in 2022. Northern bleached softwood kraft closed September 2022 at $1,497 per ton, a 12% year-over-year increase. Bleached hardwood kraft closed at $1,380 per ton, up 21% year-over-year. Lastly, old-corrugated container (OCC) prices fell $108 from September 2021, a 57% year-over-year decrease (TimberMart-South, 2022). Paper and paperboard production fell 0.3% compared to levels from last year (Forisk, 2022b; American Forest & Paper Association, 2022).

As of Q3 2022, TimberMart-South reported an average southwide pine sawtimber stumpage price of $26.20 per ton, down $0.04 from Q3 2021. Prices fell $0.49 per ton from Q2 2022. Southwide pulpwood prices declined year-over-year as well, falling to $9.63 per ton (-$0.46). Despite recent declines, both products reached the highest price points in more than a decade in Q1 2022, and current prices still are comparatively elevated (TimberMart-South, 2022). The aftereffects of the housing crisis continue to challenge sawtimber prices as inventory remains oversupplied despite surging lumber production (Baker, 2022). For up-to-date prices, check with your local forestry consultant or TimberMart-South.

Figure 1. U.S. South Softwood Lumber Capacity



U.S. South Capacity Changes

The U.S. South remains a desirable destination for capacity investment. The region continues to gain market share of softwood lumber production in North America. Established and robust markets, ample timber supply, and comparatively low prices for pine sawtimber all help enhance the attractiveness of the region for continued investment. Southern lumber capacity is currently 26.9 billion board feet (BBFT) and expects to exceed 28 BBFT in 2023 (Forisk, 2022a). The U.S. South also continues to lead North America in sawmill investments, with over $2.9 billion in project announcements from 2022–2025 that expect to add over 5.1 BBFT of capacity (Forisk, 2022b).

Wood-using pulping capacity continues to forecast declines in 2022–2023. This is partially attributable to facilities using a larger proportion of recycled fiber content for pulp production (Lang, 2021). However, investment continues to flow into Southern facilities with over $650 million in investment planned between 2022 and 2025. As a result, the Southern pulping forecast declines less compared to that of North America as a whole. The effects of increased investment are expected to be concentrated to local wood markets.

Figure 2. U.S. South Pulping Capacity

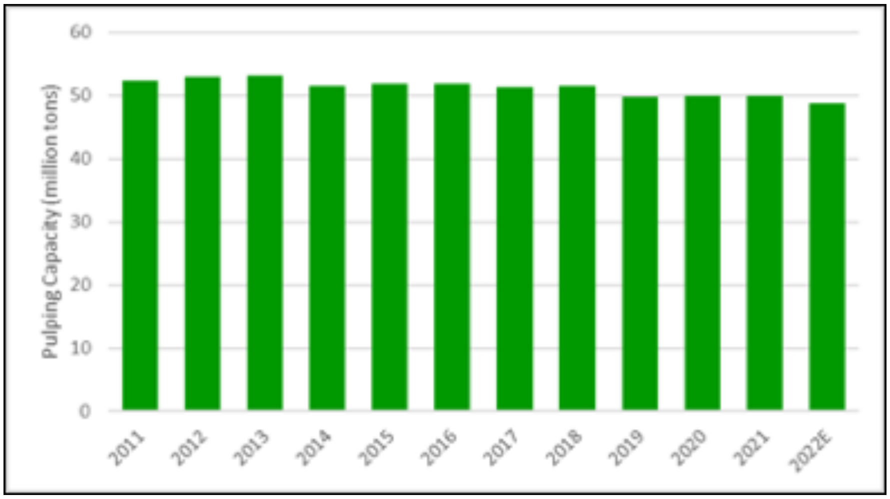


Figure 1 and 2 source: Forisk (2022a).

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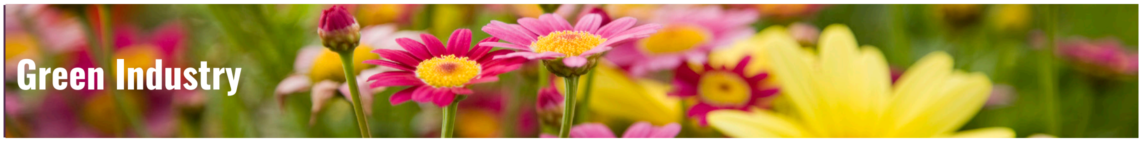

Green Industry

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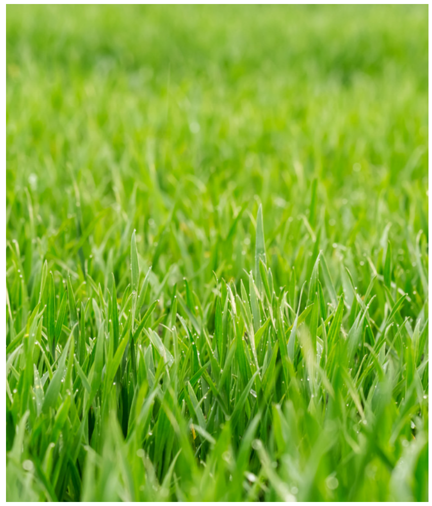
The green industry—the production, distribution, retailing, and services associated with ornamental plants; landscape and garden supplies; and nursery, greenhouse, and sod growers—is highly dependent on the overall national and local economies. In 2018, the last year estimates were calculated, the Georgia green industry was ranked as the 10th largest across all states in the United States with a regional economic impact of $9.97 billion and employment around 100,000 (both direct and indirect; Campbell & Khachatryan, 2020). Overall, in 2020 the Georgia green industry had $1.2 billion in farm gate sales; it ranks as the second largest agricultural commodity in the state (broilers is first). Notably, the greenhouse segment is the largest sector (ranking sixth in agricultural farm gate value at approximately $635 million in 2020), followed by container nursery (ranked 16th with around $221 million in farm gate sales), field nursery (17th with around $195 million in farm gate sales), and turfgrass (22nd with $126 million in farm gate sales; University of Georgia Center for Agribusiness and Economic Development, 2022).

Coming off strong 2020 demand and sales, many firms increased supply in anticipation of strong demand in 2021. Georgia green industry market demand and sales were strong again in 2021 for many green industry firms given low interest rates, a strong housing market in many areas, and consumer focus on improving landscaping.

The overall economy is an indicator of green industry growth. Forecasting the 2023 season is extremely complex given the number of unknowns in the economy. Economic indicators provide an idea of what 2023 will bring, however there are mixed signals in the marketplace. Interest rates have risen to 2008 levels, which has cooled housing markets and home renovations in many areas. The 2022 U.S. gross domestic product (GDP) and Georgia gross state product (GSP) growth rates were around 3.2% and 2.4%, respectively. In 2023 the projected GDP and Georgia GSP are projected to increase by 2.3% and 3.2%, respectively (U.S. Government Spending, 2021). However, the combination of increased inflation, supply chain issues, and the perceptions of a weaker



economic outlook may fuel reduced green industry expenditures. As prices increase, this should be worrisome for green industry firms as prices are the largest driver of purchasing of many plants, though own-price (a measure of the impact of a product's changing price on quantity demanded of that product) and income (a measure of the impact of changing income on the quantity demanded of that product) elasticities are somewhat variable between plants (Abdelmagid et. al., 2016; Hovhannisyan & Khachatryan, 2016). For instance, ornamental plants are mostly price elastic (price changes have a large impact on quantity demanded) with foliage plants being more responsive to price changes compared to other plant categories with (Hovhannisyan & Khachatryan, 2016).

Another large driver of green industry product demand is the weather. Lower minimum air temperatures during the spring have been shown to increase sales of herbs, vegetables, and flowering annuals, while increased air temperatures increased sales. Notably, a one-unit increase in maximum air temperature resulted in a 9% increase in herbs/vegetable plant sales, while a one-unit decrease in minimum air temperature resulted in a 6% decrease in sales. However, the impact on flowering annuals was larger, with a one-unit increase in maximum air temperature resulting in a 19% increase in sales and a one-unit decrease in minimum air temperature resulting in a 14% decrease in flowering annual sales (Behe et. al., 2012). National Weather Service projections for the winter of 2022–2023 indicate drier, warmer temperatures for Georgia. During the main growing and purchasing seasons (spring and summer), the industry should expect above-average temperatures across Georgia.

Final forecasts for 2023 should take all of the above information into consideration. Most likely there will be similar green industry expenditures in 2023 compared to 2022. Given the uncertainty in the economy and many consumers having made big purchases in 2020 and 2021, demand for green industry products will most likely not exceed 2022 levels.

2023 Georgia AG FORECAST
Takeaways

- **2022 was a good year for many green industry firms, with many firms seeing increased profits.**
- **There are many unknowns going into 2023 that will impact green industry sales, including higher inflation and interest rates, mixed signals within the economy, and the impact of varying strength of the housing market in Georgia.**
- **Green industry sales in Georgia are projected to be similar to 2022 levels.**

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Georgia agritourism is a segment of the state's broader tourism industry which brings visitors to local farms and attractions while also introducing tourists to Georgia's rural communities. The segment is a form of niche tourism which enhances the overall experiences of potential visitors, which in turn can increase recreational spending as well as their overall length of stay within the state. Consequently, the economic success of Georgia agritourism and the larger tourism industry are inextricably linked.

Visitor Spending is on the Rise for Both Rural and Urban Tourism Markets

According to the Georgia 2021 Tourism Economic Impact report, visitor spending in Georgia increased by 35% to approximately $28.5 billion in 2021 from $21 billion in 2020. Though tourism spending had increased since 2020, spending was 93.3% of the $30.5 billion of total visitor spending prior to the COVID-19 pandemic. Georgia is a very diversified tourism state offering visitors experiences that range from coastal landscapes to mountain destinations, and from rural retreats to urban getaways. Thus, the state's tourism economy will impact rural and urban communities differently. Eighty-six Georgia counties can be categorized as rural while 73 urban counties are aligned to one of five Georgia metropolitan statistical areas (MSAs) or state adjacent MSAs (e.g., Chattanooga, TN, Jacksonville, FL, etc.). For 2021, visitor spending in the state's rural counties increased 31% from approximately $2.8 billion in 2020 to $3.7 billion in 2021. For Georgia's urban communities, 2021 visitor spending was $24.7 billion, which was a 36% increase from $18.1 billion in 2020.

Tourist visitor spending leads to increased state and local tax collections. Both rural and urban state and local tax collections increased 38% in 2021 compared to 2020. The 2021 average state and local tax savings was $339 for rural households and $358 for urban households. Both visitor spending and increased state and local tax collections have increased above 2020.

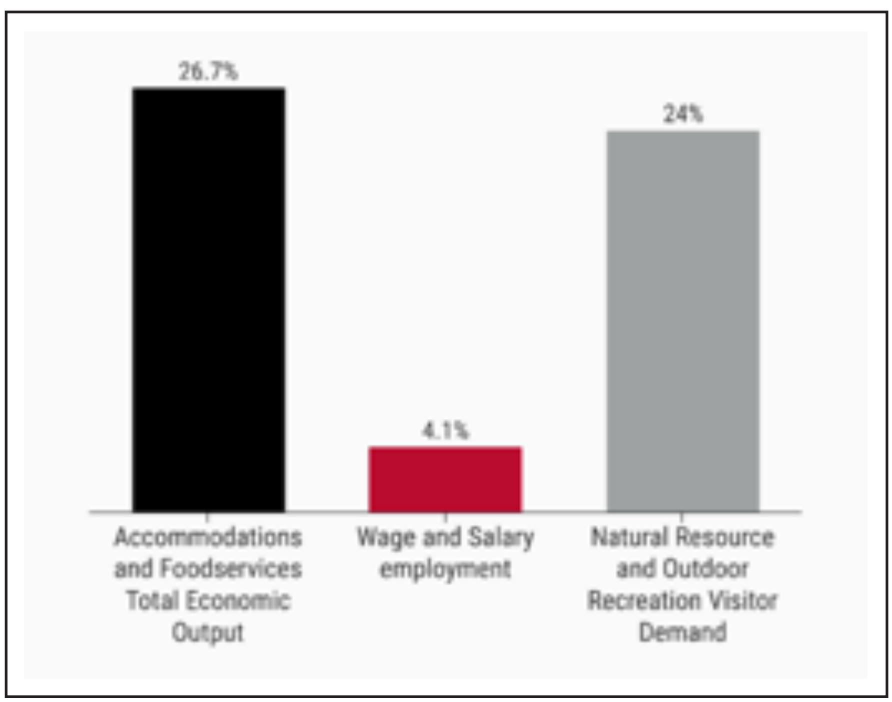
Increase in Visitor Spending Leads to Increased Total Economic Output, Jobs in Accommodations and Food Services, and Hotel-Motel Tax Collections

According to the Georgia 2021 Tourism Economic Impact report, more than 45% of visitor spending occurs within the accommodation and food services sector. Spending within the sector leads to increased total economic output and wage and salary employment. When analyzing IMPLAN economic data, total economic output for service sector production is equal to the sector's sales. For 2020, rural community total economic output for the accommodations and food services sector was $4.4 billion, and in 2021 it was $5.6 billion, an increase of 26.7% over 2020. For Georgia's urban communities the 2021 total economic output for accommodations and food services was $37.3 billion and in 2020 it was $27.9 billion, which is a 37.3% increase over that of the previous year.

The demand for hospitality and tourism services correlates with the labor-intensive accommodations and food services sector. In 2021, accommodations and food services wage and salary employment accounted for 9% of all rural jobs and 9.2% of urban county jobs. Rural wage and salary employment grew by 4.1% to 61,600 jobs from 59,200 jobs in 2020, while urban employment showed a 7% increase from 352,000 jobs in 2020 to 376,000 in 2021.

Local governments imposing a hotel-motel tax are required by state law to file a hotel-motel tax report for each fiscal period during which the tax is imposed. According to the Georgia Department of Economic Affairs, 76 counties reported their respective hotel-motel tax collections in 2022. The rural counties reported a 71.8% increase in collections from $8.2 million in 2020 to $14.1 million in 2021, while the urban communities increased 15.9% to $46 million in 2021 from $39.7 million in 2020. Similar to increased spending and local and state taxes, there also was growth in total economic output, wage and salary employment, and hotel-motel taxes. However, the percent growth in increased hotel-motel excise tax within rural communities outpaced the urban communities.

Figure 1. Percent growth comparisons (2021 versus 2020) for Georgia's rural counties.



Georgia Agritourism, Tourism and Travel, continued

Demand for Georgia State Parks and Outdoor Recreation Increases for Both Rural and Urban Communities

Natural resources and outdoor recreation are vital to tourism and are often considered as a market advantage to rural areas. Thirty-three state parks and outdoor recreation locations can be found in rural communities, while 34 are in urban counties. Visitation to the rural parks and recreation areas increased 24% from 4,900 in 2020 to 6,100 in 2021. For the urban counties, visitation increased 15% from 6,800 in 2020 to 7,800 in 2021. Similar to the hotel tax collections, the percent demand growth for the state's natural resources and outdoor recreation within rural communities outpaced the urban market.

The Current and Future State of Georgia Tourism, and Rural and Agritourism

Though the broader U.S. tourism and Georgia agritourism industries were severely impacted by the COVID-19 pandemic, visitor demand, economic output, expenditures, employment, and tax revenues continue to improve since 2020. The revenues and demand have grown from 2020 to 2021, but the growth still lags behind that of 2019.

The 2023 outlook shows signs of improvement; national travel volume and travel spending are expected to increase according to the U.S. Travel Association. U.S. leisure demand (domestic person-trips) is expected to increase 3.2% in 2023. Business demand is expected to increase 12.5% in 2023, showing an increasing confidence in the meetings and events sector.

According to the St. Louis Fed, Georgia's accommodations and food services personal consumption has been increasing since 2020. This is reflected in growing hotel demand for Georgia lodging. State hotel occupancies, revenue, and hotel rates were on the rise for Q1 and Q2 for 2022. For Q3 and Q4 of 2022, the growth is expected to slow compared to the first half of the year. However, the ongoing supply chain challenges, increased travel, and consumer price index will offset the growing revenues throughout the entire travel industry chain. While the pressures are expected to reduce the percent growth in revenues, the U.S. Travel Forecast predicts that visitor demand will grow slightly in 2023 compared to double-digit growth in 2022 for both the leisure and business travel segments.

While Atlanta is the primary hub for the business traveler, leisure destinations can be found throughout all of Georgia. Both rural and urban counties are expected to grow in total tourist demand. Industry forecasts also show a growing interest in visiting less-crowded destinations in 2023. With rural tourism and agritourism opportunities available in the majority of Georgia counties, and the combined growing interest in less-crowded destinations, continued ongoing growth in both demand and revenue are expected for rural communities.

2023 Georgia AG FORECAST Takeaways

- **Visitor spending continues to increase in Georgia's rural communities.**
- **Total economic output for accommodations and food services in Georgia's rural counties increased 26.7% in 2021 compared to 2020.**
- **Visitations to state parks and outdoor recreation areas in rural communities increased 24% in 2021 compared to 2020.**

2023 Georgia AG FORECAST

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