

2021 Georgia AG FORECAST

STRATEGIC INSIGHTS FOR GEORGIA'S #1 INDUSTRY



College of Agricultural &
Environmental Sciences
UNIVERSITY OF GEORGIA

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WELCOME

Welcome to the 2021 Georgia Ag Forecast. As we meet for today's event, we remain in the midst of the ongoing pandemic. COVID-19 has disrupted so much in our world, our country, our state and our communities. In addition, the pandemic's impact on agriculture has been significant. We have seen interruptions in processing and the supply chain. We faced the closure of schools and restaurants that use our Georgia-grown products. We have worried for the health of our employees and navigated an economy in distress. All of these factors have made this a very challenging year for agriculture. However, as we do in agriculture we have weathered storms before, and we will weather this one as well.

Good information is especially needed most during difficult times such as what we have now. We need sound information upon which to make sound business decisions. The outstanding agricultural economists at the University of Georgia have developed a comprehensive guide to help the sectors of our industry navigate the year ahead. Through the efforts of the economists who assembled this report, we hope this information provides you with the fundamentals to help guide your decisions and your business for the coming year and beyond.

As your land-grant university, we, at the University of Georgia, pledge 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. Doing this helps to ensure that we have a strong, profitable and sustainable agriculture for our great state. This is the premise of this 2021 Georgia Ag Forecast.

Thank you for attending the 2021 Ag Forecast and for placing your trust in us. Here's to a much improved 2021, and we look forward to working with you all in the coming year.

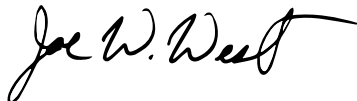
Sincerely,



Nick Place

Dean and Director

University of Georgia College of Agricultural and Environmental Sciences



Joe West

Former Interim Dean and Director

University of Georgia College of Agricultural and Environmental Sciences

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FINANCIAL OUTLOOK

Georgia and U.S. 2021 Economic Outlook

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

The 2021 economic forecast for the U.S. and Georgia is positive, reflecting continuing recovery from the COVID-19 recession. Absent another lockdown of the population and broad shutdown of the economy, the COVID-19 recession is over. It lasted three months, making it the shortest recession on record. It was short because the fiscal and monetary policy responses were massive and timely.

Although brief, the COVID-19 recession was steep and did a lot of damage to Georgia's economy. The peak-to-trough drop in employment was 11%, which was worse than the 8% drop caused by the Great Recession. Georgia's unemployment rate soared to 12.2% in April, up from only 3.5% in February. More positively, unlike the Great Recession, the COVID-19 recession did less damage to Georgia's economy than to the U.S. economy. The nation lost 14% of its jobs to the COVID-19 recession compared to an 11% drop in Georgia.

The economic forecast for Georgia calls for the economic recovery to continue, with the main drivers of the economic recovery being consumer spending, the booming housing market and Federal

Reserve policies. Full recovery of the economy will arrive sooner in Georgia than in the U.S. In Georgia, there's relatively less economic debris to clean up. In addition, many of the factors that caused Georgia to outperform the U.S. economy prior to the pandemic are reasserting themselves.

Some of the reasons why Georgia's economic recovery will outpace the U.S. include the build out of projects in Georgia's economic development pipeline; competitive state-level economic development incentives that will help refill our economic development pipeline; more leverage than most states from the housing boom; more leverage than most states from the upturn in vehicle sales given the state's large vehicle and vehicle parts manufacturing industry; good prospects for Georgia's many large military bases; our state and local governments will face less-daunting fiscal challenges than those in many other states; and our population will grow faster than the nation's due mainly to strong in-migration from other states.

The economic recovery from the COVID-19 recession is likely to occur

in three distinct phases. The first phase of recovery was the initial "bounce" in economic activity due to the lifting of "stay-at-home" restrictions and business reopenings. That phase is over. Now, we are in the second phase of the recovery, which is an extended period of "choppy" economic growth that will linger until the COVID-19 crisis is over. It's going to be a slog. Because another round of widespread lockdowns of the population or shutdowns of businesses is not expected, Georgia's economy is not likely to slide back into another deep recession. The final phase of Georgia's economic recovery begins once an effective vaccine is widely available and adopted, which we assume will occur in mid-2021. At that time, Gross Domestic Product (GDP) and employment growth quicken. Georgia's economy fully engages. A period of steady, above-average economic growth begins.

If an effective vaccine is available and widely administered by mid-2021, Georgia's GDP will increase by 4.0% in 2021. That's very good compared to the 3.7% decline estimated for 2020. Georgia's 2021 GDP growth of 4.0% will be 0.5 percentage points higher than

UNITED STATES BASELINE FORECAST 2020-2021

United States	2016	2017	2018	2019	2020	2021
Gross Domestic Product (Billions of 2012 dollars)	17,730.5	18,144.1	18,687.8	19,091.7	18,290.0	18,930.0
Percent change	1.7	2.3	3.0	2.2	-4.2	3.5
Nonfarm Employment (Millions)	144.3	146.6	148.9	150.9	141.9	143.2
Percent change	1.8	1.6	1.6	1.4	-6.0	0.9
Personal Income (Billions of 2012 dollars)	15,521.1	15,991.7	16,493.1	16,887.9	17,505.9	16,990.5
Percent change	1.7	3.0	3.1	2.4	3.7	-2.9
Personal Income (Billions of dollars)	16,160.7	16,948.6	17,851.8	18,551.5	19,442.0	19,228.1
Percent change	2.8	4.9	5.3	3.9	4.8	-1.1
Civilian Unemployment Rate (%)	4.9	4.4	3.9	3.7	8.6	8.0
CPI-U, Annual Percent change	1.3	2.1	2.4	1.8	1.1	1.9

Source: The Selig Center for Economic Growth, Terry College of Business, University of Georgia, 2020, www.selig.uga.edu

FINANCIAL OUTLOOK

Georgia and U.S. 2021 Economic Outlook, *continued*

the 3.5% rate estimated for U.S. GDP. Georgia's labor market will improve, too. The number of jobs will rise by 1.5% in 2021, which is above the 0.9% gain estimated for the U.S.. Most of those gains will come in the second half of 2021. Georgia's unemployment rate for 2021 will average 5.1%, or about 0.9 percentage points lower than the 6.0% rate estimated for 2020.

The prospects for personal income growth are not as good as the prospects for GDP and jobs. The state's personal income will grow by only 0.2%, whereas U.S. personal income will decline slightly. Low expectations for personal income growth mostly reflect the wind down of the massive federal stimulus programs that provided large transfer payments to individuals in 2020. The slowdown will occur even though wage and salary based income will grow faster in 2021 than in 2020.

Let's go through the phases of Georgia's recovery in more detail. In late April 2020, Georgia eased restrictions on businesses' operations and on people's movements. Many other states soon followed and opened up their economies. Despite contagion fears and social distancing, people emerged and many businesses fully or partially reopened.

Economic activity surged. There was a sharp increase in consumer spending. Retail sales quickly recovered and soon surpassed pre-pandemic levels. In addition, home sellers and providers of services that could not be postponed any longer benefited quickly.

The initial bounce was uneven, with many types of businesses not benefiting much. For example, consumers strongly shifted spending from services to goods, which helped retailers and manufacturers of consumer goods, but hurt providers of services ranging from hair salons to hotels and motels. The labor market also rebounded. In the initial three month rebound, Georgia added back 55% of the jobs that it lost and the nation added back 42% of the jobs it lost. In the third quarter, GDP returned to 95% of its pre-pandemic level, up from only 90% in the second quarter. The initial rush to spend represents a rebound from extreme shocks and massive economic stimulus rather than economic reality. That pace of economic recovery could not be sustained.

In the final quarter of 2020, the pace of economic recovery is slowing sharply. The economic realities of permanent job and income losses are setting in, most of the large federal fiscal stimulus programs are winding down, an effective vaccine

is still not available, and the COVID-19 pandemic continues. Official lockdowns are over, but many, even among those who are not members of vulnerable populations, continue to self-isolate. Almost everyone is practicing social distancing, which limits the spread of the virus, but also restrains the economic recovery, especially for providers of many high-contact services.

In 2021, a balance of positive over negative forces should sustain Georgia's economic recovery. V-shaped recoveries for retailers and housing are the biggest positives, but are also the biggest exceptions. An elongated U, rather than a V, will better describe the recovery for most businesses. It will help that many households have saved a lot and will spend some of their savings. The Federal Reserve will do "whatever it takes" to support the struggling economy, including keeping policy interest rates at zero into 2023. It is very good that COVID-19 dramatically accelerated the adoption of digital technology and remote work. That will support increased spending for high-tech equipment. Another positive is that depleted inventories and firmer orders will shore up industrial production. In addition, a weaker dollar will boost Georgia's exports, but because nearly all foreign economies will be struggling, the contribution that international trade makes to Georgia's GDP growth in 2021 will not be large.

In 2021, economic development success will strongly support Georgia's economic recovery. Despite COVID-19, Georgia's economic developers landed more economic development projects in fiscal year 2020 than in fiscal year 2019. This success reflects many factors that make Georgia a great state in which to do business, as well as an extremely competitive team of economic development professionals. Demographic forces are another factor behind Georgia's economic recovery. In 2021, Georgia's population will grow at a pace that exceeds the national average – 0.8% in Georgia versus 0.5% for the U.S. In 2021, domestic net migration will be lower than prior to the pandemic, but higher than in 2020.

GEORGIA BASELINE FORECAST 2020-2021

Georgia	2016	2017	2018	2019	2020	2021
Gross Domestic Product (Billions of 2012 dollars)	498.3	516.6	529.0	539.5	519.6	540.4
Percent change	3.5	3.7	2.4	2.0	-3.7	4.0
Nonfarm Employment (Thousands)	4,371.4	4,452.6	4,535.9	4,613.8	4,429.6	4,497.3
Percent change	2.6	1.9	1.9	1.7	-4.0	1.5
Personal Income (Billions of dollars)	439.9	463.8	489.0	511.7	538.4	539.4
Percent change	3.7	5.4	5.4	4.7	5.2	0.2
Housing Permits, Total	51,675	51,240	59,315	53,823	50,500	59,000
Percent change	13.4	-0.8	15.8	-9.3	-6.2	16.8
Unemployment Rate (percent)	5.4	4.7	3.9	3.4	6.0	5.1

Source: The Selig Center for Economic Growth, Terry College of Business, University of Georgia, 2020, www.selig.uga.edu

FINANCIAL OUTLOOK

Georgia and U.S. 2021 Economic Outlook, *continued*

There will be many negative forces restraining Georgia economic recovery. Most importantly, the pandemic is not over. Due to social distancing and contagion fears, many high-contact businesses will continue to operate at greatly reduced capacity levels that may not be very profitable. Some types of businesses, for example live entertainment, will remain essentially shut down. The debt that companies took on to survive the pandemic may limit their growth during the recovery. The absence of large-scale stimulus programs, if not continued, will limit growth in 2021. Business and personal bankruptcies will rise dramatically, which will be a source of persistent layoffs.

Put it all together and economic growth will be weak until an effective vaccine is widely available and adopted. This forecast assumes that one or more approved COVID-19 vaccines will be widely available and administered by mid-2021. If this assumption holds, the “slog” will be over and economic growth will accelerate in the second half of 2021. If it doesn’t hold, it will take much longer before the economy fully engages and recovers.

The expectation of an above-average pace of economic growth in the second half of 2021 reflects a dramatic broadening of Georgia’s economic recovery to include even the most severely impacted industries and geographies, only possible because of the anticipated widespread vaccination of the population. For the first time since the pandemic began, high-contact industries such as restaurants, hotels and live entertainment will be able to fully engage and regional economies — such as Brunswick — that are highly dependent on travel, hospitality and tourism will gain traction and rapidly move forward. Many businesses will find that they are significantly understaffed and will boost hiring, and consumer and business confidence will rise significantly. A virtuous cycle of above-average economic growth will begin and will likely be sustained for several years.

In the wake of the pandemic, job growth across Georgia’s industries will be different than it was before the virus

crisis. In 2021, industries hit hardest by the COVID-19 pandemic will initially post the fastest growth, but the high percentage gains reflect rebounds off very depressed levels. Examples include, bars, restaurants, hospitality, tourism, movie theatres, live entertainment, air transportation, high contact personal services and the sharing economy.

In contrast, logistics, distribution, warehousing, professional and business services, the information industry, FinTech, education and health services will recover relatively quickly, posting solid job growth in 2021. In addition, positive job growth will occur in manufacturing, financial activities, transportation and utilities, but full recovery may take a couple years. Due to the strong housing market, homebuilders will be hiring aggressively, but poor prospects for commercial real estate markets mean that nonresidential construction firms will be laying off workers. In 2021, retail sales will be strong, but retail jobs will continue to be lost as market shares shift to less labor-intensive channels. In addition, state and local government jobs will be lost.

In 2021, home sales and homebuilding will be a major driver of Georgia’s economic recovery. Housing experienced a V-shaped recovery in 2020 and activity will rise even higher in 2021. The number of single-family home starts for new construction will increase by 19% and new multiunit homebuilding will increase by 6% — impressive gains for an overall economy that is struggling to recover.

Low mortgage rates, job growth and population growth are some of the traditional supports for housing that look to boost demand in 2021. In addition, telecommuting and social distancing made the home more important to people. Low yields on other types of assets probably means investors will be very active in residential real estate markets. In addition, the demographics are turning more favorable for housing. For example, millennials are reaching the age where they will buy homes in much larger numbers.

Another support is that appreciating home values will give people the

wherewithal, and the confidence, to buy homes. As of mid-2020, Georgia’s existing home prices were 23% higher than prior to the Great Recession peak. The year-over-year increase in Q2 2020 was 4.5%. The degree of home price recovery has varied widely within the state, however. Home price appreciation will continue through 2021, but home prices will rise more slowly. We will probably see a 3% increase in home prices in 2021. One reason home price appreciation will slow is that, as mortgage forbearance programs wind down, more distressed properties will come onto the market.

The outlook for manufacturing is positive. In 2021, industrial production will increase more quickly than state GDP. The main driver of growth in manufacturing production will be recovering demand for manufactured goods. Due to factory shutdowns in the first half of 2020, there’s also need to produce more to restock stores and warehouses. Georgia saw many manufacturing economic development projects announced in 2020 and those projects — as well as some announced in prior years — will continue to build out, contributing to the increase in industrial production that occurs in Georgia in 2021.

Georgia’s largest manufacturing industry is food processing. Food processors fared relatively well during the pandemic, but had to accommodate to higher sales to grocers and lower sales to restaurants and institutions. It is very good therefore that many of the economic development projects announced over the last few years were food processors.

The build out of headquarters projects will be an important force powering Georgia’s current and future economic growth. Thirty companies on the 2020 Fortune 1000 list are headquartered in Atlanta. That’s up four companies from 2019. Atlanta is behind only New York City and Houston among U.S. metros headquartering Fortune 1000 companies. In spite of the pandemic, Georgia competed effectively for headquarters projects in 2020. For example, in September Papa John’s chose Georgia as the location of its new global headquarters, bringing 200 jobs to the Atlanta Metropolitan Statistical Area (MSA).

FINANCIAL OUTLOOK

Georgia and U.S. 2021 Economic Outlook, *continued*

Information technology, financial technology, data processing, cyber security and development of software and mobile apps will strongly support Georgia's economic recovery. The list of information technology and financial technology companies that announced major projects in recent years is very long. Information technology, financial technology and cybersecurity companies received a boost from the COVID-19 crisis because contagion fears pushed people to adopt new mobile technologies, including mobile banking and touchless payment systems. Most consumers are pleased with such services and will never return to their pre-crisis ways of banking and shopping.

The COVID-19 crisis dramatically boosted the use of online and digital services, which increased the need for cyber security. Indeed, the digital transformation of many industries, ranging from health care to education to mobile banking, was an existing trend that the pandemic dramatically accelerated. The speed of this widespread digital transformation increases the risks of cyber-attacks, which puts Georgia's cybersecurity industry onto higher short- and long-term growth trajectories.

Georgia's cybersecurity industry is located primarily in Atlanta and Augusta. Talent is the key to Atlanta's success, whereas the presence of the U.S. Army Cyber Command at Fort Gordon and Georgia Cyber Center are the foundations of Augusta's cybersecurity economy. Fort Gordon provides a critical mass of dependable contracts. For example, in 2020 Perspecta announced that it will open a regional office at the Georgia Cyber Center, creating 178 jobs in support of the U.S. Army Cyber Command at Fort Gordon. The Georgia Cyber Center provides the leadership and talent needed to attract more cybersecurity firms to Georgia.

Due to the continued recovery of U.S. and global GDP the prospects for Georgia's large transportation and logistics industry are very good. Another positive factor is the abundance of logistics and distribution projects in Georgia's economic development pipeline. This

Takeaways

- *Georgia's economic recovery from the COVID-19 recession will continue.*
- *COVID-19 is the main recession risk and the strongest economic headwind.*
- *The consumer will be the main strength of the 2021 economy.*
- *Home sales and homebuilding will be important economic drivers.*
- *Georgia's economic recovery will outpace the U.S. economic recovery.*
- *Economic development projects will provide a solid push to Georgia's economy.*

highly cyclical industry also will benefit from more spending by consumers, increases in industrial production, more homebuilding, population growth, improvements in Georgia's transportation infrastructure, the state's expanding role as a regional and national logistics and distribution center, and the accelerated shift from physical retail to online retail.

Major infrastructure investments at the Port of Savannah are paying dividends. In 2020, the Georgia Port Authority put into operation the first nine of 18 new working tracks at the Mason Mega Rail Terminal. When the project is complete, it will double the Port of Savannah's rail capacity and will be the largest on-dock rail terminal at any port in North America. The Savannah Harbor Expansion Project positions the Port of Savannah for substantial long-term growth.

The risks to the forecast are skewed to the downside. COVID-19 is the main recession risk. A dramatic worsening of the pandemic could cause the economy to go back into recession. Even if there is not a dramatic surge in COVID-19 cases, more federal fiscal stimulus may be needed to avoid a double-dip recession. A mistake in the U.S. government's response to the pandemic is a downside risk to the forecast. Because risks are

tilted towards the downside, it is better to err on the side of too much stimulus rather than not enough — especially given that the interest rates are at or near record lows.

There are some geopolitical risks capable of triggering another downturn. Trade tensions with China and high levels of sovereign debt are two of the most important. Any major escalation of the U.S.-China trade war may be damaging to the U.S. economic recovery. Due to both the COVID-19 pandemic and insufficient deleveraging after the Great Recession, sovereign debt levels are very high and could bring on a global financial crisis. A sovereign debt crisis that begins in the European Union or developing economies could quickly spread to other financial markets and be very problematic for the U.S. economy.

In summation, Georgia's economy will continue to recover from the COVID-19 recession. The main drivers of growth will be consumer spending, the booming housing market and Federal Reserve policies. COVID-19 is the main recession risk. The availability of an effective vaccine would remove that risk. We assume that will happen in mid-2021. If correct, Georgia's economy will shift onto a steadier, above-average growth trajectory. ■

CROPS

Peanuts

Amanda Smith, Public Service Associate, Department of Agricultural and Applied Economics, University of Georgia

Early 2020 started out unremarkable for peanuts. There was ample carryover and forward contracts were around \$400 per ton. Even so, planted peanut acres in Georgia increased 125,000 acres from last year to 810,000 acres, the third-highest number of acres planted since 1991. U.S. planted peanut acres were also up 16.2% to 1.67 million acres. Even though forward contracts were limited and lower than in previous years, Georgia farmers turned to peanuts because prices for alternative crops were low due to the COVID-19 pandemic.

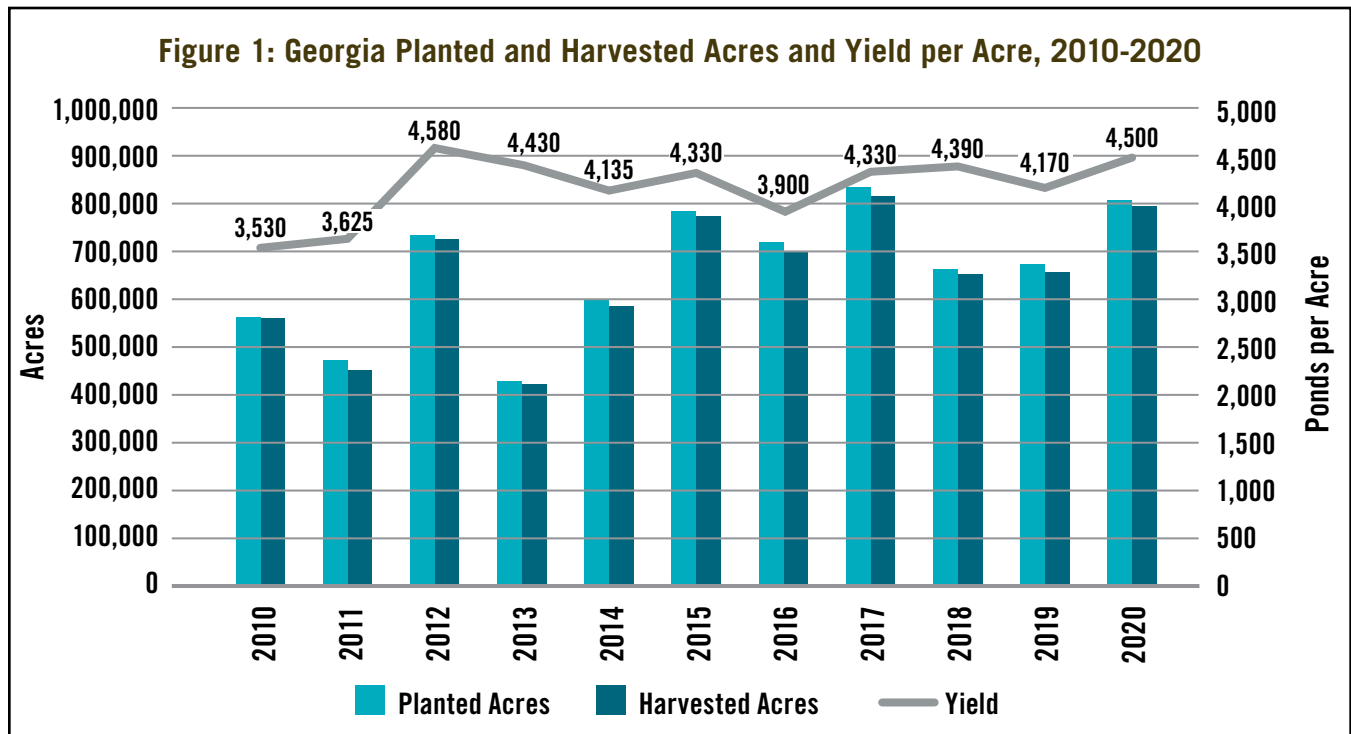
In addition to more acres, the U.S. Department of Agriculture forecast 2020 yields up from 2019 with the U.S. average at 4,093 pounds per acre and Georgia at 4,500 pounds. If realized, this would be the second-highest Georgia yield on record. Higher yields and more harvested acres led to expectations of the third-highest U.S. peanut production on record at 3.32 million farmer stock tons. Georgia production is projected to reach a record 1.8 million tons. The quality

of the 2020 crop, as determined by the Federal State Inspection Service, looks good and especially better than the 2019 crop, which had issues with aflatoxin.

Demand for edible peanuts increased substantially as people sheltered at home during the coronavirus pandemic and chose peanut products for an affordable, quality protein. This increase was highest in peanut butter (up 5.0%), peanuts in candy (up 3.9%), and snack peanuts (up 2.9%). This trend is expected to continue for the 2020-2021 marketing year, with food use forecast at 1.6 million tons, up 2.4% from 2019-2020. Exports are projected to remain strong and relatively stable at 800,000 tons. This is second to the record U.S. exports seen during 2019 at 804,000 tons. Crush is also expected to be up 9.8% from last year, to 425,000 tons. These all result in peanut disappearance expected to be at a record high 3.35 million tons for the 2020-2021 marketing year.

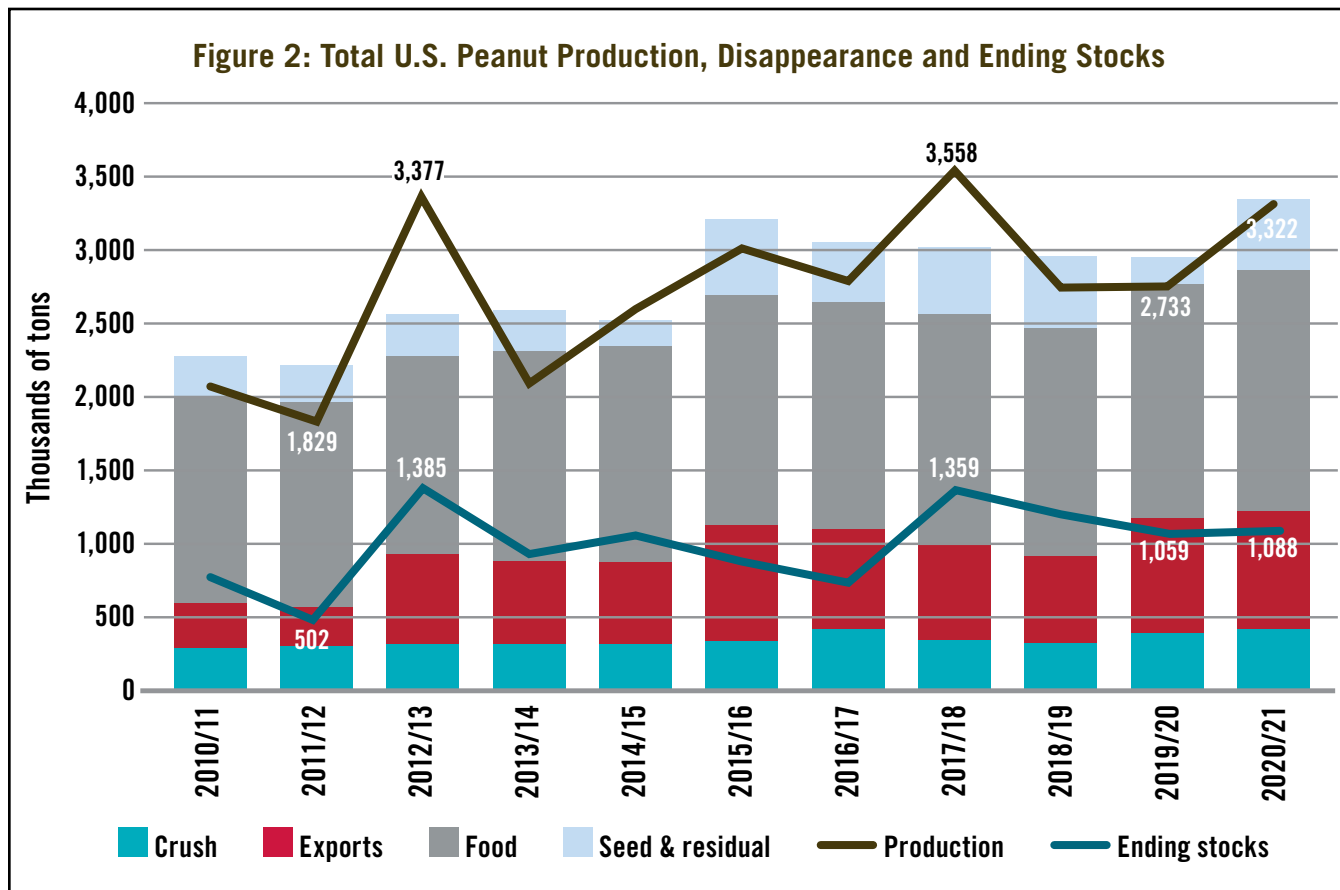
Looking ahead to 2021, there will be another large carryover of quality peanuts, with ending stocks up 28,500 tons from 2019. This is likely to result in forward contracts similar to what was seen at the beginning of 2020. A season average price of \$425 is a reasonable planning expectation for Georgia growers in 2021. We are likely to see fewer acres planted to peanuts, but that will ultimately depend upon crop rotations and the prices of alternative crops. ■

Figure 1: Georgia Planted and Harvested Acres and Yield per Acre, 2010-2020



CROPS

Peanuts, *continued*



Takeaways

- U.S. and Georgia peanut farmers planted more peanuts during 2020 and abundant yields led to the third-highest production on record for the U.S. and a record high for Georgia.
- Peanut disappearance is projected to reach a record high during the 2020-21 marketing year, with increases in exports, crush and food use.
- Georgia prices for forward contracts are expected to be similar to last year, with a season average price of \$425 per ton.

2021 Cotton Outlook: Hope is in the Air

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

For cotton producers, the year 2020 was a whirlwind of uncertainty. The unfolding of the COVID-19 pandemic severely interrupted the global cotton supply chain. To control the spread of the virus, lockdowns and social distancing were implemented in many parts of the world. The cotton industry suffered tremendously from the temporary closure of textile factories and shopping malls. The decline of global cotton demand, trade uncertainty and economic downturn due to COVID-19 combined created downward pressure for cotton prices for 2020. Looking ahead to 2021, uncertainty for the cotton market still exists, but hope is in the air. Progress with COVID-19 vaccines and treatment have lifted expectations and uncertainty has receded. As a result, cotton prices are on the road of recovery for 2021. Factors continuing to influence 2021 cotton prices include subsequent waves of COVID-19, efficient vaccination, global economic recovery, fiscal and monetary policies, and the global trade situation.

Cotton products are discretionary items, thus cotton consumption follows the trend of the global economy. According to the December 2020 release by the Organization for Economic Cooperation and Development (OECD), after a sharp decline of global economy in 2020, global GDP is projected to rise around 4.25% in 2021 and recover to pre-pandemic levels by the end of 2021. Similar trends are also observed for the U.S. economy. Real gross domestic product (GDP) in the U.S. increased at an annual rate of 33.1% in the third quarter of 2020 after a 5% decline in the first quarter and a 31.4% decline in the second quarter of 2020. The collapse in employment has partially reversed. The unemployment rate in the U.S. dropped to 6.7% in November 2020, down from the peak of 14.7% in April 2020. Unprecedented government and central bank actions avoided the worst damage for the global economy. Looking forward, the

fiscal and monetary policies of major economies in the world and whether efficient vaccination can be achieved will shape the direction and speed of the economic recovery.

Global cotton mill use is forecast at 114 million bales in 2020, 11.8% (12 million bales) above 2019, but still significantly lower than 2017 and 2018 levels (Figure 1). Retail sales in clothing and clothing accessories in the U.S. receded to 19 billion dollars in October 2020 after experienced an 86% decline in April 2020 from the pre-Covid level. World cotton production in 2020 is forecast at 116.1 million bales, 5% (6 million bales) below the previous year. The world ending stocks are projected at 101.4 million bales, the second-highest level on record. Cotton prices is expected to recovery from the 2020 price level. However, there is still a long way to go before cotton price to recover to the pre-Covid level.

U.S. cotton production is projected at 17.1 million bales in 2020, 14%, about 2.8 million bales, below the 2019 crop. The U.S. planted acreage for upland cotton was forecast at 11.9 million acres, down 11.7%, about 1.6 million acres, from last year (Figure 2). In Georgia, the planted acres declined to 1.2 million acres in 2020 from 1.4 million acres in 2019.

U.S. cotton exports are projected at 14.6 million bales for 2020, 930,000 bales below the 2019 crop. The U.S. dollar weakened since March 2020, when the pandemic worsened in the U.S and the Federa Reerve Bank eased monetary policy with low interest rates to stimulate the economy. This weakening of the U.S. dollar supports U.S. cotton exports as the relative price of U.S cotton falls. U.S. ending stocks are projected at 7.2 million bales in 2020. The high level of ending stocks in the U.S. continues the downward pressure on U.S. cotton prices.

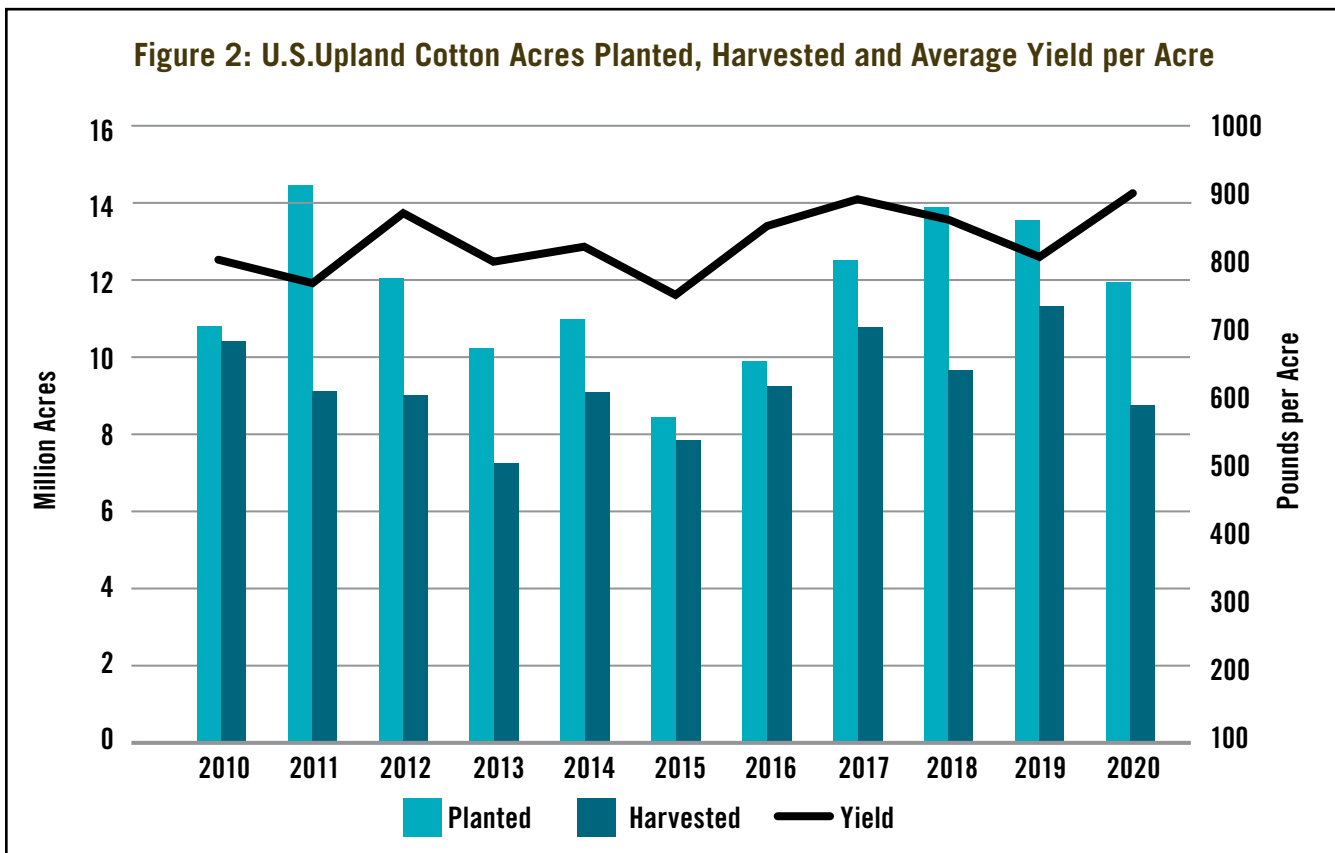
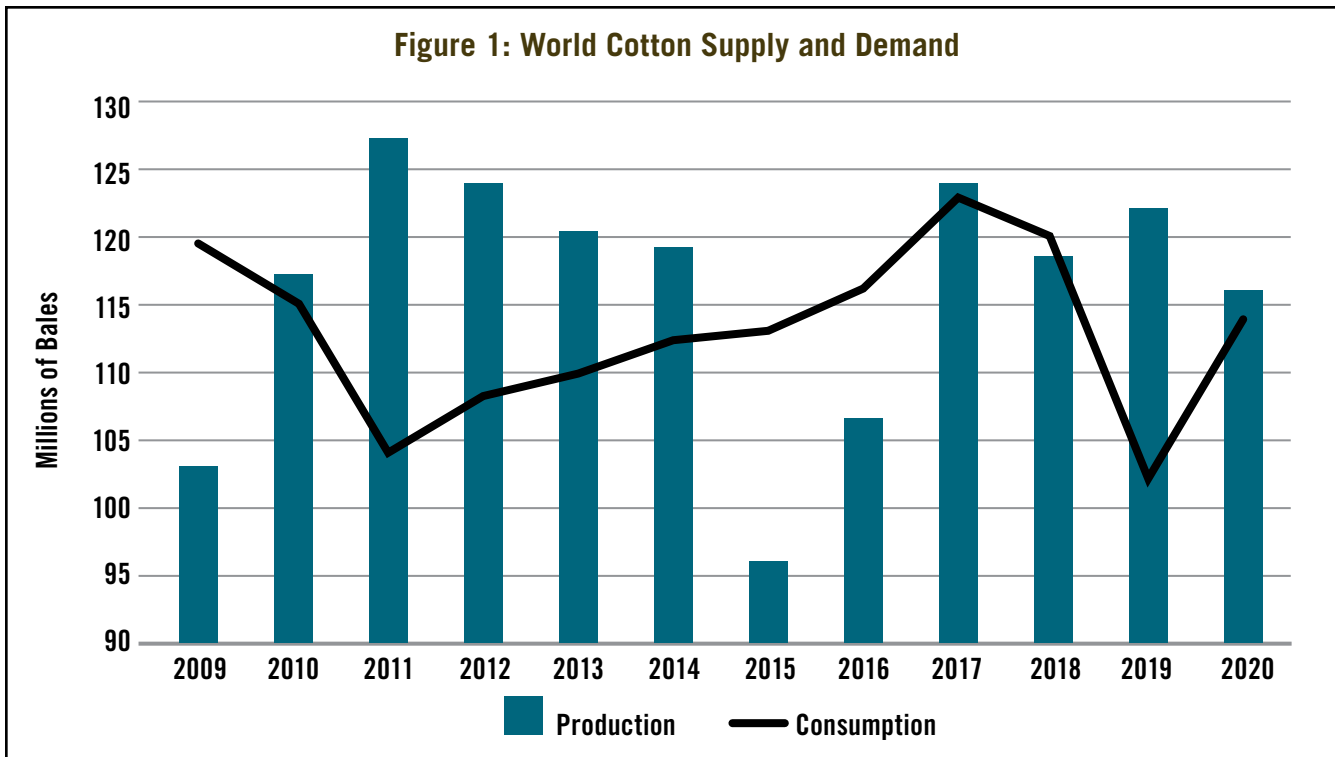
The road ahead is brighter, but still challenging. U.S. cotton acreage and production would probably continue to decline for 2021. Managing the pandemic will impose strains on the economy and recovery of the cotton market. In December 2020, futures prices for the 2021 crop were around 71 cents per pound. The cash prices for the 2020 ncalendar year range from a low of 44.66 to a high of 70.55 cents per pound. The longer-term damage to cotton consumption by the pandemic may take a while to resolve, and producers need to adjust their production practices to improve productivity or cut costs. The optimistic likely price for 2021 is 67 to 72 cents per pound or better. The pessimistic likely price for 2021 is 62 to 66 cents per pound. For planning and budgeting projections, a price of 66 to 70 cents per pound is suggested for 2021. ■

Takeaways

- *U.S. cotton acreage and production will likely continue the downward trend for 2021.*
- *The recovery of cotton prices depends on subsequent waves of COVID-19, efficient vaccination, global economic recovery, fiscal and monetary policies, and the global trade situation.*
- *The longer term damage to cotton consumption by the pandemic may take a while to resolve, and producers need to adjust their production practices to improve productivity or cut costs.*

CROPS

2021 Cotton Outlook: Hope is in the Air, *continued*



Fruits and Tree Nuts

Endudue Greg Fonsah, Professor, REI Coordinator and Agribusiness Extension Economist, Fruits, Vegetables and Pecans Department of Agricultural and Applied Economics, University of Georgia

The decrease in Consumer Price Index (CPI) in the first and second quarter of 2020 was partially blamed on COVID-19, even though the declining CPI started before the virus was declared a pandemic on March 21. Some of the factors responsible for the decrease in 2020 CPI for fresh fruits were reduced export activities, growers trying to move their fresh produce from the foodservice sector directly to retail outlets when the restaurants and hotels were temporarily shut down, and consumer general reactions to COVID-19, among others. U.S. Department of Agriculture Economic Research Service (USDA/ERS) reports showed that the fresh fruits consumer price index reached the 2016-2018 average around August because the retail prices for peaches, strawberries and grapes increased significantly compared to the same period in 2019.

The U.S. seasonal and perishable fruit and vegetable growers are requesting Section 201 global safeguard investigation against Mexico for their excessive exports of blueberries into the U.S. market, which apparently caused serious injury to domestic growers. Although the greater emphasis is on blueberry, USDA/ERS reports using data from the U.S. Department of Commerce have shown that dumping exists in other horticultural crops such as strawberry and pepper.

The reports further indicated that U.S. import of blueberry has grown exponentially in the past decade and a half. For instance, in 2005 only 50 million pounds of blueberries were imported, compared to nearly 400 million pounds in 2018. Although much blame is directed to Mexico, other countries such as Chile and Peru are also culprits. Requesting Section 201 to only Mexico while exonerating the other exporting countries such as Peru and Chile may pose another legal challenge to U.S. growers' claims (Figure 1).

However, comparing import data from 2010 and 2019, it should be noted that Chile, Canada and Argentina were the major blueberry players in U.S. markets. Moreover, Chile's export to the U.S. was mostly in the first quarter, while Canada and Argentina were in the summer and fall seasons, respectively. Imports from Chile alone were not enough to depress market prices in 2010. In 2019, although Chile's imports were still significant, the bulk entered the U.S. market in January and February, with a small quantity in March (Figure 2).

On the other hand, Mexico's largest blueberry supplies penetrated the U.S. market from March to May, about the same time as Georgia and Florida market windows, thus hurting the growers in these regions and giving reason for requesting Section 201.

For instance, the U.S. domestic price was \$12 per flat in May 2019, whereas it was \$19 per flat in the same time period in 2010 when the market was not flooded (Figure 2). On the other

hand, the U.S. domestic price in August and September were \$11.50 to \$13.50 per flat in 2019, compared to \$17 to \$25 per flat in 2010. This could explain why the U.S. seasonal and perishable fruits and vegetable growers in the southeast region, particularly Georgia and Florida, are requesting Section 201 global safeguard investigation against Mexico and not the other trading countries (Figure 2).

A USDA Agricultural Marketing Service report clearly depicts a three-year trend of blueberry imports from Mexico between 2018 and 2020. The largest import volume from Mexico for the three successive years occurred in March and April. Although blueberry per capita consumption has increased from 0.33 pounds from 2000-2002 to 2.02 pounds in 2017-2019, adding huge import supply from Mexico, Chile, Argentina and Peru to the record 373 million pounds of U.S. production in 2019 is enough to flood the market and suppress prices. ■

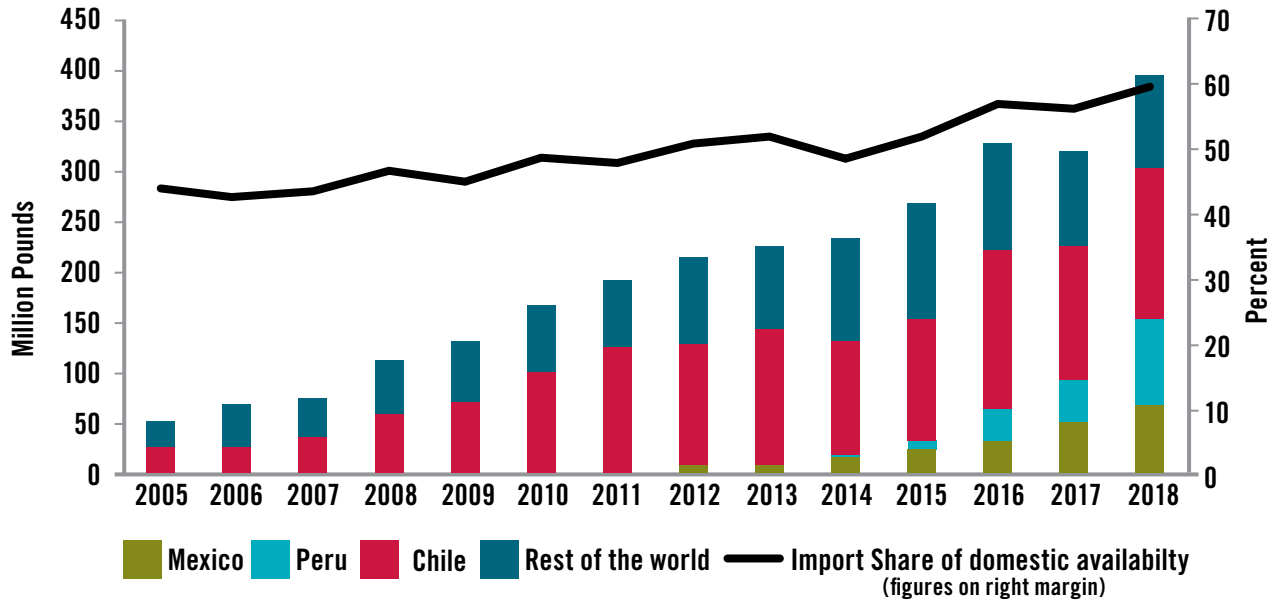
Takeaways

- *If Mexico's current blueberry production and export trends persist, then sluggish price, finger-pointing and requests for Section 201 global safeguard investigation will persist.*
- *Blueberry imports have increased from 50 million pounds in 2005 to nearly 400 million pounds in 2018.*
- *Reduced export activities, growers trying to move their fresh produce directly to retail outlets when the restaurants and hotels were temporarily shut down, and consumer reactions to COVID-19 were blamed for the decrease in 2020 Consumer Price Index.*

CROPS

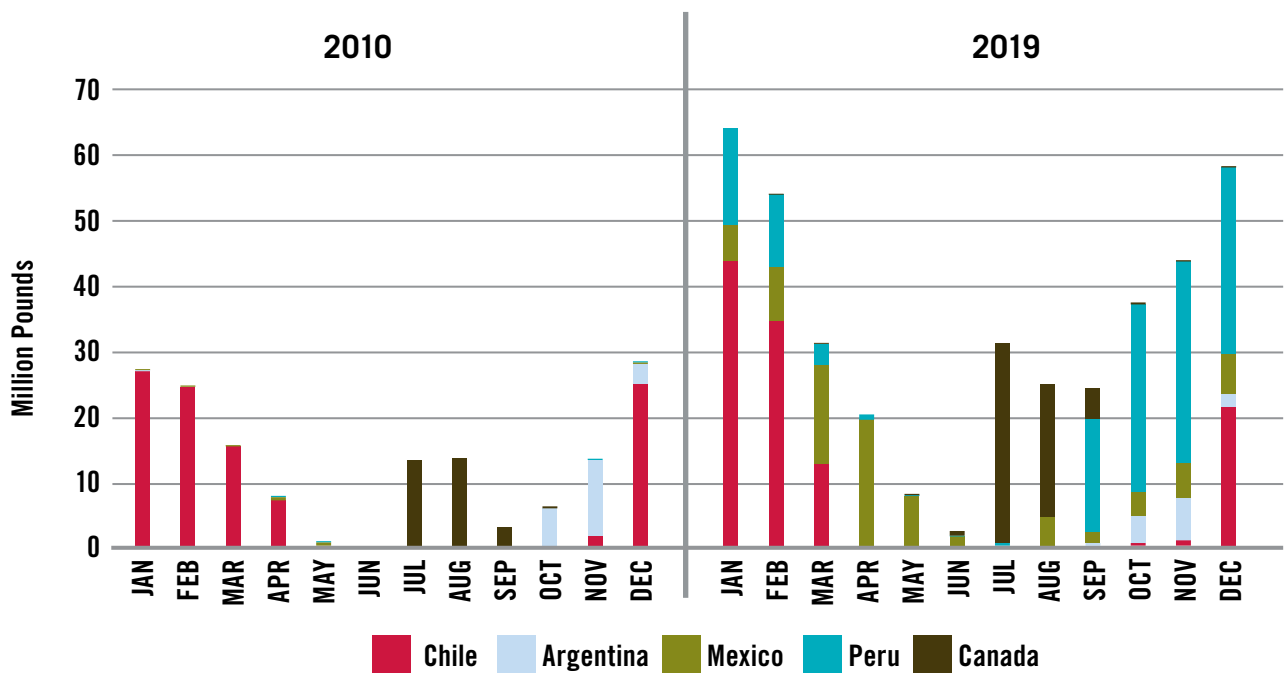
Fruits and Tree Nuts, *continued*

Figure 1: U.S. blueberry imports by source and share of domestic availability, 2005-2018



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, U.S. Census Bureau.

Figure 2: Major fresh-market blueberry importing countries, 2010 and 2019 (Millions of pounds).



Note: Top five countries of U.S. fresh cultivated blueberry imports. Source: U.S. Department of Commerce, U.S. Census Bureau.

Vegetables and Pulses

Esendugue Greg Fonsah, Professor, REI Coordinator and Agribusiness Extension Economist, Fruits, Vegetables and Pecans Department of Agricultural and Applied Economics, University of Georgia

A U.S. Department of Agriculture Economic Research Service (USDA/ERS) report —using data from the National Agricultural Statistics Service (NASS) and U.S. trade data from the Census Bureau of the U.S. Department of Commerce — depicted that the harvested area for U.S. vegetable and pulse has been fluctuating. In 2017, 2018 and 2019 it was 7.7, 7.0 and 6.2 million acres, respectively. In 2019, reported harvested area was 6.2 million acres compared to 7.0 million acres in 2018, thus a -7.7% decrease in harvested area compared to 2018. Vegetables and pulses include fresh and processing, potatoes, dry bean, peas, lentils, sweet potatoes and mushrooms (Figure 1).

Contrary to area harvested, total vegetable production has been declining from year to year since 2016. For instance, 1,332 million hundredweight (cwt) was produced in 2016 compared to 1,173 million cwt in 2019, an almost 12% decrease. Similar comparison between 2018 and 2019 shows a decrease in production of -2.5% (Figure 1). Despite the decreasing trend in production, crop value in 2019 was \$19.4 billion compared to \$18.9 billion in 2018, equivalent to an 8.6% increase. However, the 2019 crop value was 7.3% less than 2017 which was \$20.9 billion (Figure 1). Vegetables and pulses unit values have been fluctuating between \$15 to \$17/cwt. The strong \$16.55/cwt unit value obtained in 2019 was 11.3% higher than \$15.52/cwt recorded in 2018 (Figure 1).

That is why, despite the reduction in area harvested and production, the crop value increased by 8.6%.

U.S. vegetable and pulse imports have been increasing steadily since 2016, when import value was \$12.9 billion, to \$14.2 billion in 2019, equivalent to a 9.7% increase. On the other hand, comparing 2018 import value of \$13.9 billion with 2019 depicts a slight increase of 1.9%. Contrary to

import value, the U.S. also exports its vegetables and pulses. Although the 2019 export value of \$6.9 billion was 4% higher than the 2018 value of \$6.7 billion, Americans imported more produce than they exported, thus reflecting negative vegetable and pulse trade balances. Most importantly, Americans ate more vegetables and pulses in 2019 compared to 2018 (Figure1).

Price certainty is a major problem faced by vegetable growers. The 2019 Grower Price Index (GPI) was stronger than the 2016-2018 average, especially from January to March, June to August and in the fourth quarter, October to December. The 2020 GPI was at a record high in January and quickly declined when COVID-19 became a pandemic. USDA/ERS reports show significant volatility in fresh-market vegetable prices. The good news is most of the top 10 vegetables grown in Georgia experienced increased prices in the 2019 crop season compared to

2018. For instance, the season-average price of onion was \$15 in 2018 and \$17.50 in 2019, an increase of 17%. Bell pepper, squash and tomatoes recorded 24%, 18% and 19% increases in seasonal-average price respectively.

Although growers farm gate prices for some vegetables started off strong in early first quarter 2020, the situation quickly turned around due to COVID-19. For instance, prices for vegetables like tomatoes, sweet corn, carrots, cucumber and onion started off pretty strong in January 2020 compared to 2019 and 2018, but experienced a drastic decline in March after COVID-19 was declared a pandemic (Figure 2)

Although seasonal-average price for snap beans did not change in the 2018 and 2019 crop seasons, it started off lower than the 2019 price in the first quarter of 2020. Other vegetable producers who did not stand a chance were lettuce, celery and head lettuce growers. ■

Takeaways

- *Total vegetable harvested area was -7.7% lower in 2019 compared to 2018. It is expected to be lower in 2021.*
- *Unit value for vegetables was 11.3% higher in 2019 compared to 2018. It is expected to be strong in the 2021 crop season.*
- *Total vegetable production was -2.5% in 2019 compared to 2018. It is expected to further decrease in 2021, thus keeping prices strong.*

CROPS

Vegetables and Pulses, *continued*

Figure 1: U.S. Vegetable and Pulse Industry Trend, 2016-2019

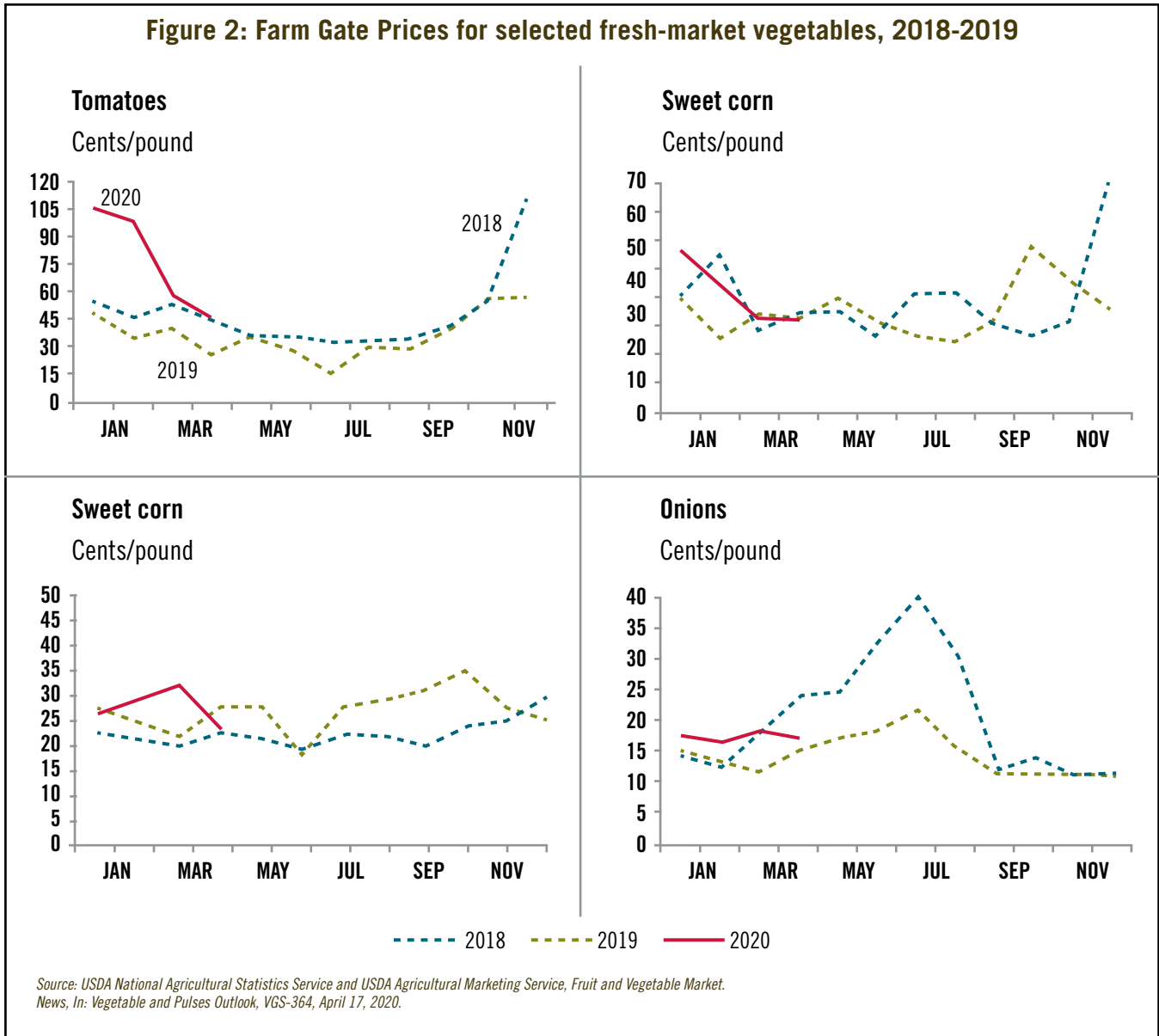
Item	Unit	2016	2017	2018	2019	Percent change 2018-19 ⁶
<i>Area harvested</i>						
Vegetables, fresh & processing ⁴	1,000 acres	2,987	2,390	2,300	2,070	-1.5
Potatoes	1,000 acres	1,038	1,045	1,015	942	-0.9
Dry beans, peas and lentils	1,000 acres	3,794	4,096	3,554	3,064	-13.5
Other ²	1,000 acres	167	163	148	155	15.9
Total	1,000 acres	7,896	7,694	7,017	6,230	-7.7
<i>Production</i>						
Vegetables, fresh	Million cwt	400	336	314	304	3.4
Vegetables, processing ⁴	Million cwt	372	333	357	346	-5.5
Potatoes	Million cwt	450	451	450	423	-2.1
Dry beans, peas and lentils	Million cwt	69	58	62	55	-12.0
Other ²	Million cwt	41	45	37	40	24.5
Total	Million cwt	1,332	1,223	1,220	1,173	-2.5
<i>Crop value</i>						
Vegetables, fresh	\$ Millions	10,809	11,422	9,656	10,678	19.6
Vegetables, processing ⁴	\$ Millions	1,903	2,145	2,096	1,854	-3.2
Potatoes	\$ Millions	4,089	4,135	4,005	4,138	9.2
Dry beans, peas and lentils	\$ Millions	1,508	1,343	1,313	1,017	-20.4
Other ²	\$ Millions	1,843	1,883	1,868	1,720	-2.3
Total	\$ Millions	20,152	20,928	18,938	19,407	8.6
<i>Unit value</i>						
Vegetables, fresh	\$/cwt	27.02	34.01	30.74	35.09	16.7
Vegetables, processing ⁴	\$/cwt	5.12	6.44	5.87	5.36	6.0
Potatoes	\$/cwt	9.09	9.17	8.90	9.79	11.5
Dry beans, peas and lentils	\$/cwt	21.86	23.16	21.18	18.57	-9.6
Other ²	\$/cwt	44.95	41.84	50.48	42.53	-26.0
Total	\$/cwt	15.13	17.11	15.52	16.55	11.3
<i>Imports</i>						
Vegetables, fresh	\$ Millions	7,486	7,354	7,682	8,008	4.2
Vegetables, processing ⁴	\$ Millions	2,515	2,618	2,805	2,806	0.0
Potatoes	\$ Millions	1,241	1,365	1,510	1,529	1.3
Dry beans, peas and lentils	\$ Millions	117	216	214	177	-17.3
Other ²	\$ Millions	1,588	1,606	1,731	1,680	-2.9
Total	\$ Millions	12,947	13,158	13,941	14,200	1.9
<i>Exports</i>						
Vegetables, fresh	\$ Millions	2,114	2,159	2,200	2,274	3.4
Vegetables, processing ⁴	\$ Millions	1,586	1,513	1,435	1,374	-4.3
Potatoes	\$ Millions	1,737	1,814	1,786	1,923	7.7
Dry beans, peas and lentils	\$ Millions	681	841	536	622	16.1
Other ²	\$ Millions	729	819	757	787	4.0
Total	\$ Millions	6,846	7,147	6,713	6,980	4.0
<i>Per capita availability</i>						
Vegetables, fresh	Pounds	155.9	157.1	149.2	153.4	2.8
Vegetables, processing ⁴	Pounds	106.2	104.7	112.2	114.3	1.9
Potatoes	Pounds	110.2	117.8	116.0	118.8	2.4
Dry beans, peas and lentils	Pounds	10.7	11.1	13.7	11.1	-19.2
Other ²	Pounds	11.2	12.0	9.5	11.7	23.2
Total	Pounds	394.1	402.7	400.6	409.2	2.1

Sources: Vegetable and Pulses Outlook, VGS-364, April 17, 2020, USDA/ERS.

CROPS

Vegetables and Pulses, *continued*

Figure 2: Farm Gate Prices for selected fresh-market vegetables, 2018-2019



2021 Corn, Soybean and Wheat Outlook

Amanda Smith, Public Service Associate, Department of Agricultural and Applied Economics, University of Georgia

Tommie Shepherd, Public Service Associate, Center for Agribusiness and Economic Development, University of Georgia

2020 ended on a positive note for U.S. grain producers. Strong demand and reduced yields due to late-season dryness across parts of the grain belt served to lift corn, soybean and wheat prices throughout the second half of 2020. Still, despite the U.S. Department of Agriculture's continued downward revisions in crop yields, the 2020 corn and soybean crops did not give the appearance of a short crop year, but actually yielded a rather large crop by historical standards. Record-low wheat acreage in 2020 of 44.3 million acres, as a result of land shifting into corn and soybeans, also led to low inventory levels and rising prices.

Globally, tight grain stocks supported higher U.S. prices as 2020 drew to a close. The run up in prices was a result of strong demand, led by record corn exports of 2.65 billion bushels. The export market was driven by purchases from China, with U.S. corn exports tripling over 2019 levels and soybean exports rising by around 20%. Exports to China are expected to remain strong throughout 2021 as the Chinese work to rebuild the country's pork industry after its multiyear Asian Swine Fever epidemic. European Union (EU) countries are also likely to increase imports of U.S. feed grains as EU feed supplies tighten and southern hemisphere suppliers are hampered by drought conditions. By year end, the national average corn price estimate had been raised to \$4 per bushel, bringing it in line with the more positive price levels of the 2013-2014 time period. Also in late 2020, nearby futures contracts gained ground relative to deferred month contracts, indicating that hedging into deferred months did not offer a strong incentive to store, another indication of a demand driven market.

In soybean markets, the USDA reduced soybean yield estimates by 1.2 bushels per acre to 50.7 bushels per acre, although once again not suggestive of a truly short crop year, as the total

soybean crop was estimated to be the third largest on record. USDA's late-season adjustments raised yield estimates in the southern states, including Georgia, based on favorable growing conditions. Total soybean production was estimated to end the year ahead of 2019, but lower than 2018.

Indicative of just how difficult crop forecasting can be, USDA lowered 2020-2021 crop year soybean carryover stocks from 610 million bushels in August to 190 million bushels in November. To put these carryover stock numbers in perspective, the November estimate would be about 4% of total usage. Carryover stocks in 2018 were 28% of total usage and 2019 carryover stocks were 13% of total usage. Stocks at this low level give a clear indicator of the tight markets that will prevail going into 2021. U.S. average soybean price estimates of \$10.40 per bushel for 2020 were the highest since 2013.

These market conditions — strong export demand, low ending stocks, and higher prices for 2020 — offer a preview of the market conditions that may be expected going into 2021. As farmers gear up in anticipation of strong demand, USDA's most recent baseline estimates project that soybean acres will increase by 7%, or about 6 million acres, in 2021, to a total of 89 million acres, resulting in the third-largest planting on record. Outside

USDA, some private analysts are predicting a smaller increase in soybean acres, which would prove more bullish for prices in an industry characterized by both inelastic supply and demand. Corn acreage is projected to decline by 1%, or about 1 million acres, to around 90 million acres, although this would still be the second-largest corn planting on record. These projections put corn yields at 180.5 bushels per acre and soybean yields at 50.6 bushels per acre. Wheat acres are also projected to rebound, from 44.3 million acres in 2020 to 46 million in 2021.

In Georgia, soybean and wheat acres declined in 2018 and 2019 as producers switched to corn, although this situation may reverse itself in 2021 due to higher expected returns to soybeans relative to corn and typical crop rotations (Figure 1). Georgia grain prices have closely paralleled U.S. average prices over the past several years, and are likely to continue to do so in 2021. Based on current national-level price projections, Georgia producers may expect to see 2021 prices in a range of \$4.10 to \$4.20 per bushel for corn, \$10.90 to \$11.10 per bushel for soybeans, and \$5.10 to \$5.30 per bushel for wheat. These projections do not take into account any unexpected major weather or policy shocks that could occur during the 2021 growing season. ■

Takeaways

- Global demand for corn, wheat and soybeans will remain strong in 2021.
- 2020 ending stocks of U.S. feed grains will be tight going into 2021.
- Producers can expect strong prices but should still use available risk-management tools.

2021 Beef Outlook

Tommie Shepherd, Public Service Associate, Center for Agribusiness and Economic Development, University of Georgia

The COVID pandemic caused severe economic disruptions around the world in 2020 and agriculture was among the industries that were most significantly affected. In the U.S., the spread of the disease and the accompanying need for adopting preventative measures may have had little impact at the farm level, but shutdowns and slowdowns at processing facilities led to massive supply-chain disruptions which played out in different ways for different farm products. At the same time, the closure of schools, restaurants and other foodservice facilities, and cancellation of business travel, vacations, conferences and other events where food plays an important role, resulted in a tremendous consumer shift to meals prepared and consumed at home.

The pandemic hit the U.S. beef industry just as it was entering the herd liquidation phase of the current cattle cycle. A typical cattle cycle runs roughly 10 years and begins with an expansion phase, during which beef cow numbers increase, followed by a liquidation phase, in which cow numbers decline and prices increase in response to tightening supplies. U.S. beef cow numbers, which have been increasing since 2014, peaked in 2019 at around 31.7 million head, and are projected to decline through 2025, when they are estimated to reach a low of around 30 million head.

Temporary COVID-19-related plant closures during spring and summer 2020, and the processing line slowdowns that accompanied implementation of social-distancing measures, led to a severe backlog of slaughter-ready cattle that had to be held over in feedlots and, consequently, fed to higher-than-ideal weights. By mid-2020, a backlog of roughly one million extra cattle were being held in inventory. The fear of extended supply-chain disruptions led to a temporary but severe price spike for boxed beef which, along with school and restaurant closures, resulted in a decline in second quarter per-capita beef consumption. Fortunately, both retail prices and consumption had returned to normal levels by year end. Although

most of this extra inventory had been worked off by late 2020 through the use of additional shifts and weekend slaughter, long-term damage had been done in terms of producer prices. The backlog, combined with the normal increase in slaughter which typically accompanies the early liquidation phase of a cattle cycle, led to significant downward pressure on feeder steer prices, which is expected to persist well into 2021.

The downturn in beef cow numbers that characterizes the liquidation phase of a cattle cycle is expected to continue over the next four to five years as more cows are sent to slaughter and fewer heifers are held back for breeding purposes. The paradox of the cattle cycle is that, as more cows are sent to slaughter during the early part of the liquidation, beef production increases, placing downward pressure on prices at the same time that supply is decreasing. This situation, combined with the lingering effects of the pandemic, will translate into even greater downward pressure on beef prices, and thus on cattle prices, through the supply chain throughout 2021. As the current liquidation phase plays out, declining cow numbers will eventually lead to decreases in beef production and rising prices throughout the supply chain between 2022 and 2025.

Beef exports, which were down during 2020 due to globally weak economic conditions, are generally expected to show some recovery in 2021 on the expectation of a return to more normal conditions. The bright spot for exports

in 2020 was China, which imported record quantities of U.S. beef as its swine industry continued to suffer from the effects of Asian Swine Flu. U.S. beef imports, on the other hand, increased on imports of processing-grade beef as consumers adjusted to beef products more commonly consumed as part of at-home meals.

The majority of Georgia's cattle farms are small to mid-sized cow-calf operations that will, presumably, be most heavily impacted by prices for weaned calves. The Food and Policy Research Institute (FAPRI) at the University of Missouri, which is widely recognized for its price forecasting initiative, estimates benchmark Wyoming-Nebraska prices for weaned calves at \$156 per hundred pounds (cwt) for 2021, rising steadily to \$185 per cwt by 2025. Estimates for Georgia will, of course, differ based on shipping costs to Midwestern feedlots. Rising feed costs, driven by higher corn and soybean prices, will impact the value of feeder cattle in 2021 (see row crop outlook section). Producers who finish cattle in Georgia for specialty markets will need to factor these higher projected feed costs into their profit equation in 2021.

In summary, the COVID pandemic isn't over and the liquidation phase of the current cattle cycle is just beginning, so the two most influential factors affecting cattle markets in 2020 will still be in play in 2021. Producers should expect to see more of the same, as conditions that prevailed throughout 2020 will continue to influence markets through at least the first half of 2021, with more noticeable recovery in 2022 and beyond. ■

Takeaways

- *The beef industry has entered the liquidation phase of the current cattle cycle.*
- *Cattle prices will rise as cow numbers and production trend down.*
- *Domestic and export demand should rebound in 2021 as the economy slowly recovers from the COVID-19 pandemic.*

2021 Pork Outlook

Tommie Shepherd, Public Service Associate, Center for Agribusiness and Economic Development, University of Georgia

The U.S. pork industry was impacted by the 2020 COVID-19 pandemic in a manner very similar to the beef cattle industry, even though the two industries entered the pandemic with different underlying market fundamentals. Although hog farms are, by their very nature, rather socially distanced operations, processing plants are not. Plant closures in April and May, due to infected workers and the need to adapt production lines to social distancing and sanitation protocols, temporarily reduced production capacity by as much as 40% nationwide. These COVID-19 related processing slowdowns, coupled with strong domestic and export demand, caused pork stocks — especially ham and bacon stocks — to be drawn down significantly in early to mid 2020, resulting in higher prices to consumers.

The ensuing backlog of slaughter-ready hogs was largely cleaned up by fall and, although issues still exist in some packing plants, the industry was back to about 95% of capacity by the end of the year. In the southeast, plants in North Carolina and Tennessee that typically process Georgia hogs never closed, although they did slow their production lines for a time at the height of the pandemic in early spring. Reports indicate that a backlog of up to 1.1 million hogs in the southeast may have resulted from processing slowdowns in North Carolina alone.

The pandemic followed on the heels of a multiyear expansion in the U.S. pork industry, which has seen growth in both hog production and processing plant capacity. This rapid expansion is seen as a response to growing domestic demand, as well as export demand from major U.S. trading partners including Mexico, Canada, Japan and China. Exports to China, in particular, have grown significantly in spite of relatively high pork prices as a result of the Asian Swine Fever (ASF) epidemic that has decimated that country's swine herd over the past few years.

The U.S. Department of Agriculture projects that pork production will continue to grow, albeit more slowly, and prices will decline in 2021. In a situation similar to the cattle cycle, the pork industry reached the peak of a hog cycle in 2020, signaling the likelihood that hog numbers may decline through 2025 or 2026. This is supported by the fact that the breeding herd is smaller than it was a year ago. The most recent survey of producers' intentions shows that pork producers intended to reduce farrowings in late 2020 and early 2021 by about 4%, which will limit production growth to around 2% in 2021 compared to more robust growth in the range of 3% to 4% in recent years. Higher feed costs in 2021 will squeeze producer margins as tight supplies of feed grains and strong global demand drive up corn and soybean prices (see corn, soybean and wheat outlook section). Higher feed costs in 2021 may also reduce finished carcass weights somewhat, although this effect may be largely overcome by the industry's continual gains in productivity.

Export sales, which are typically 25% to 35% of total production, are projected to decline in 2021 as world markets deal with the lingering effects of a COVID-19-induced economic slowdown. China is likely to import less U.S. pork as it slowly works toward rebuilding its domestic swine herd and other countries, most notably

Brazil, gear up to meet its demand for pork imports at lower prices. Mexico, historically the largest buyer of U.S. pork, may also reduce purchases as its currency continues to devalue against the U.S. dollar.

Growers will face risk in terms of demand and rising feed costs in 2021. Global demand for pork will likely remain flat or decline slightly in 2021, as consumers in the both the U.S. and abroad grapple with the long term effects of COVID-19, including higher-than-normal levels of unemployment and reductions in household income. China is also reportedly making progress in rebuilding its swine herd, which may reduce the demand for imports of U.S. pork at the same time that it increases the demand for U.S. feed grains and whey products. This raises an important long-term question for an industry that has expanded, in part, to meet the demands of Asian countries like China, Vietnam, Hong Kong and others whose swine industries have been hit hard by ASF. Namely, when their domestic swine production finally does recover from ASF, where will U.S. producers find a home for their excess capacity? Fortunately for U.S. producers, they may be able to avoid having to address this question for a while longer given the recent Chinese ban on German and Polish pork exports due to the discovery of ASF in those countries. ■

Takeaways

- *Pork production is expected to grow more slowly in 2021.*
- *Rising feed prices will negatively impact producers' profit margins.*
- *Export demand will remain strong for the immediate future.*

Broiler Industry – UGA Forecast

Todd E. Southerland, Senior Vice President, Food and Agribusiness Industry Manager, SunTrust Bank

Price divergence occurred at the peak of the COVID-19 crisis, as processing capabilities were taken offline, which in turn caused a bottleneck that resulted in temporary supply shortages in various retail channels. These challenges were exacerbated by record demand surges due to stockpiling; intense cost pressure due to COVID-related protocols and labor challenges; and severe disruptions in many export markets, which traditionally serve to balance an approximate 18% of domestic supplies. Quite simply, the U.S. protein complex is not sufficiently nimble to accommodate the near-immediate imbalance in meal consumption that occurred as a result of the ongoing pandemic.

Despite the chicken market showing some stability over the latter months of 2020, it remains difficult to draw forward-looking conclusions given that this is a period of seasonal weakness for the industry. Foodservice demand still lags historical averages, and supplies remain high as labor and production resume to traditional levels. The general trade environment for much of the agricultural sector remains muted due to softness in demand from international markets as a result of currency issues and logistical challenges, and potential third-wave shutdowns have also resulted in lower commodity prices for a variety of goods. Shockingly, even with shelter-in-place orders, sports and live entertainment closures and minimal foodservice availability, the wing market has eluded all obstacles and left buyers paying premium prices for any product obtainable. With COVID-19 cases on the rise, monitoring restaurant traffic and frankly keeping these foodservice channels open will be crucial to maintain any sense of normalcy in the coming months.

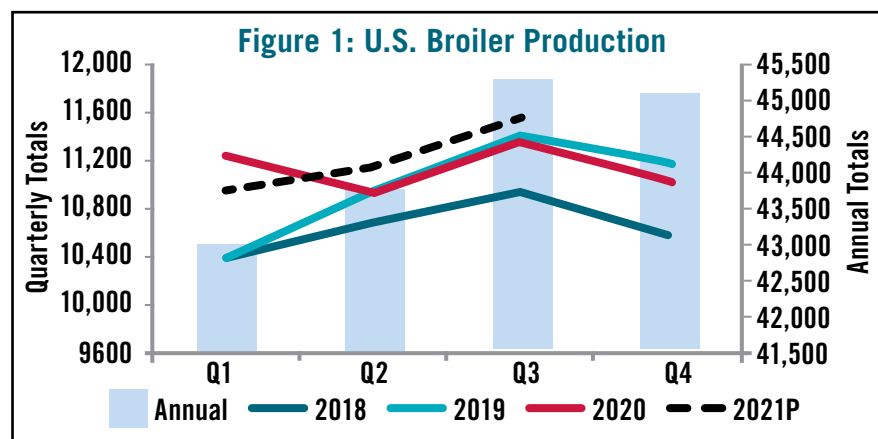
Production

It is rare to see a sequential production decline in the second quarter of any year, as integrators are typically ramping production ahead of the strong summer season. In 2020, this is precisely what occurred when April plant closures

and labor shortages resulted in a reduction in capacity for several weeks. However, production challenges for most integrators were not as severe as for other protein sectors, and the backlog of heavier birds was accommodated by the temporary downturn in egg sets. Generally speaking, the broiler complex has been operating at closer to normal levels since late August (Figure 1).

The industry is continuing to battle a resurgence in supply of heavy birds due to the challenges in demand from foodservice channels, including the notable shuttering of live entertainment venues, schools and universities, and

restaurants. As mentioned previously, the wing market has not been materially affected because it is far less price sensitive, as wings are sold to the consumer by count, not weight. However, the breast market has been generally weak due to excess meat. Conversely, the relative performance of the fast-food sector, which has been resilient in the latter stages of the pandemic, has driven a shortage in smaller birds, which are scarce due to capacity constraints unrelated to COVID-19. The volatility of the market will continue in 2021, but with the added benefit that export markets appear to be



Takeaways

- Despite production disruptions emanating arising from the COVID-19 pandemic, broiler production has achieved some sense of relative normalcy and 2020 volumes — totaling 44.6 billion pounds — are forecast to be 2% greater than 2019 production (Figure 1).
- Broiler pricing experienced turbulence throughout the year due to the conflicting effects of food service closures in one major market channel, but record retail demand among grocers (Figure 2).
- Export markets have begun to reopen and stabilize to pre-COVID-19 crisis levels as U.S. processors seek destinations for record 2020 production; total export volumes forecast to 7.3 billion pounds, up 2% year-over-year.

LIVESTOCK

Broiler Industry – UGA Forecast, *continued*

improving with each month. This will help the domestic market clear excess supplies over the first half of 2021 and prepare for more predictable markets as the strain of the pandemic is expected to ease later in the year.

Price

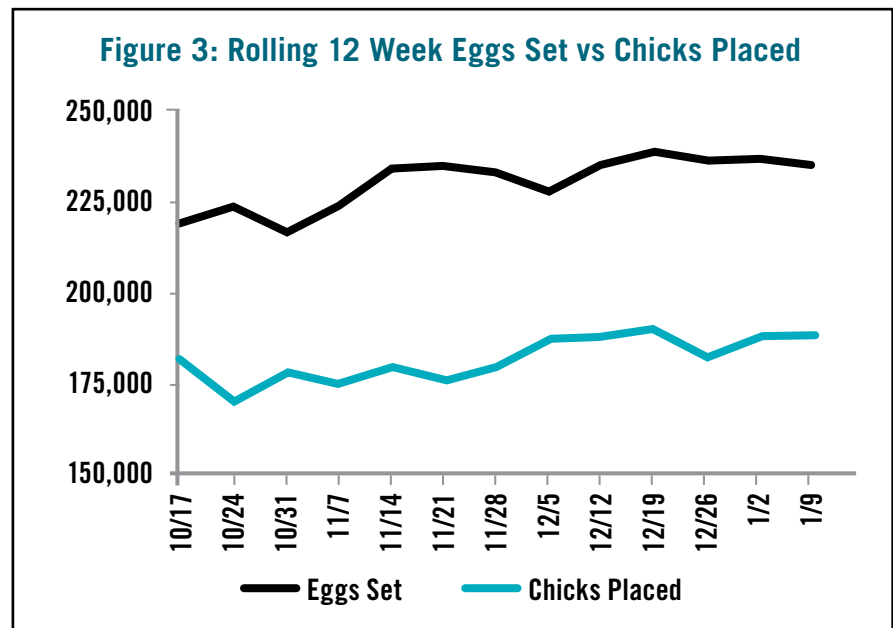
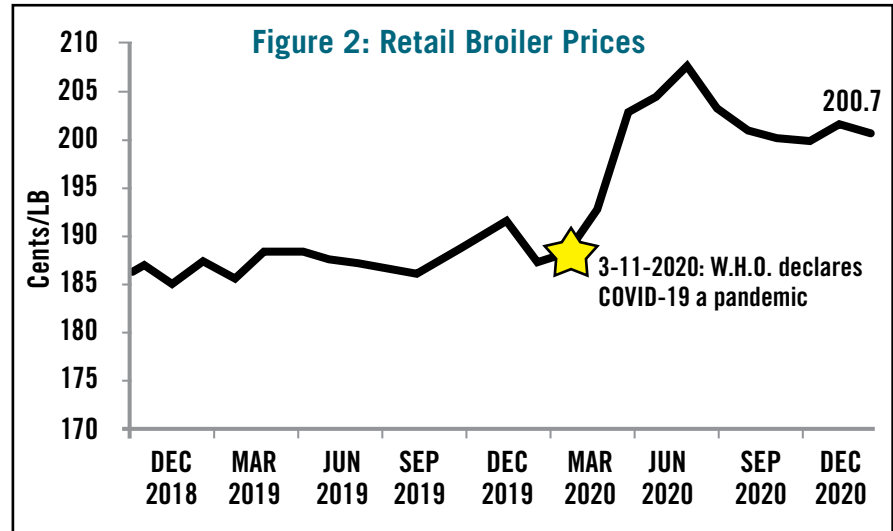
As has been widely publicized, food retailers witnessed record traffic in 2020, and many reported strong increases in margins and profitability. With consumers focused on availability, retailers enjoyed significant pricing power, which is evidenced by the material rise in retail pricing across most protein sectors. As shown in Figure 2, the aggregate rise in chicken prices was around 10%, though more popular cuts generally rose by higher percentages. As retailers remain on the offensive in an attempt to take market share, pricing decisions will remain important, but consumers should expect an inflationary price environment for food over the coming years. The “long tail” analysis of COVID-19 includes the likelihood of lasting impacts on the food industry, such as enhanced food-safety protocols and employee safeguards, all of which come at a price.

In wholesale markets, it will be important to monitor commodity prices as we move towards the spring season, at which time we would traditionally expect pricing to improve ahead of summer inventory decisions. The timing of any improvement will depend on a number of factors but, importantly, recent broiler hatchery data (Figure 3) does not currently reflect any outsized changes in supplies. If the export markets continue to gain momentum, thus allowing excess dark meat and leg quarters to clear, it should create a sufficient landing spot for heavier birds, allowing commodity markets to rebound in the summer.

Trade

Export markets began to show signs of recovery in the latter half of 2020, bringing some much-needed relief to both the broiler and pork sectors. Mexico, traditionally a large volume buyer of U.S. chicken, experienced major disruptions in 2020 due to the pandemic, but

should come back online this year. More encouraging have been the resumption of shipments to Eastern Asia, including China, which potentially signals better trade relations can be achieved under the new Administration. Certainly there is more work to be done, but monthly shipment data is encouraging. ■



Sources

Livestock, Dairy, and Poultry Outlook October 2020, LDP-M-305, U.S. Department of Agriculture, Economic Research Service, November 16, 2020. UrnerBarry, Wall Street Journal

2021 Dairy Outlook

Tommie Shepherd, Public Service Associate, Center for Agribusiness and Economic Development, University of Georgia

In sharp contrast to some other areas of animal agriculture, the dairy industry seems to have weathered the 2020 COVID-19 pandemic comparatively well. U.S. milk production got off to a strong start early in the year, took a brief pause in May as processing plants adjusted to social distancing and sanitation protocols, and had largely recovered by June, ending the year with both strong production and prices.

Although the dairy industry faced many of the same challenges as other commodity sectors, such as loss of markets due to school, restaurant and other foodservice-related business shutdowns and slowdowns, it had a relatively easier time adapting to alternate marketing channels such as increased retail sales and sales to government programs like the U.S. Department of Agriculture's Farmers-to-Families Food Box program. Nonetheless, processing plant costs have increased as a result of the COVID-19 crisis and the ability to pass these higher costs along to consumers has its limits.

At the height of the COVID lockdown in April and May, as school and foodservice markets dried up, dairy cooperatives were quick to address the processing bottleneck by ordering excess production to be dumped on the farm and by instituting supply-control programs. As supply chains adjusted to accommodate the demands of more consumers preparing meals at home, production rebounded rapidly, with the industry adding an additional 7,000, 4,000 and 5,000 head of milk cows in July, August and September, respectively. Production per cow also grew by 2% as a result of favorable weather conditions and strong returns over feed costs. In addition to strong domestic consumption as more consumers transitioned to preparing meals at home, export sales were also strong, especially for cheese and whey products.

Maintaining this level of growth into 2021 will be a challenge for several reasons. First, milk production growth

in the 2% to 3% range has historically been sufficiently high as to outpace demand, resulting in burdensome stocks of butter, cheese, nonfat dry milk and whey that put downward pressure on prices, forcing producers to cut back on production. Second, although the initial COVID shock of supply chain disruption has largely been overcome, the longer-term effects of global recession due to reduced consumer income and contraction in industries such as hospitality and travel, which involve food sales, will be much longer lasting. Additionally, projected higher feed costs in 2021 will negatively impact producer margins as corn and soybean prices rise. By late 2020, soybean prices were about \$10.40 per bushel and corn was near \$4 per bushel. Finally, milk production in the European Union has also shown recent growth in the 2% range, meaning that there will be a lot of milk available on the world market at competitive prices in 2021.

Considerable uncertainty surrounds the dairy industry in 2021. In 2020, dairy farm profitability was buoyed by direct federal government assistance payments through two Coronavirus Food Assistance Programs (CFAP1 and CFAP2), which doled out approximately \$2.3 billion to dairy farmers. Payments under CFAP effectively raised average farm-level milk prices by \$3.68/ per hundred pounds of milk (cwt). In total, federal support to the dairy industry through CFAP, the Farmers-

to-Families Food Box program, the Paycheck Protection Program (PPP) and the Dairy Margin Coverage program amounted to roughly \$5 billion. Direct stimulus payments to taxpayers also boosted food sales in the face of record high unemployment. At this time, it is uncertain whether any additional federal support will be forthcoming in 2021.

In 2021, the industry can expect a continuation of the expansion in cow numbers that began in 2020. The USDA projects that the prevailing strong growth in milk production that characterized 2020 will continue into 2021, with the industry adding an additional 15,000 cows and milk production per cow growing by 335 pounds, or approximately 40 gallons, per year. This would amount to an additional 3.4 billion pounds of milk in 2021, which presumes a growth rate of 1.5% compared to the 2% growth rate of 2020. The U.S. All Milk Price for 2021 is projected to be \$17.70 per cwt, which would represent a reduction of .55 per cwt from 2020's estimate of \$18.25. The All Milk price represents the weighted average of the price received by farmers for milk going into all use classes defined under the Federal Milk Marketing Order program. Georgia dairy farmers typically receive a Mailbox Milk Price (Federal Marketing Order minimum price less any authorized cooperative deductions) that is about \$3 higher than the USDA All Milk Price, suggesting that, in 2021, they could reasonably expect an average Mailbox price of about \$20.70 per cwt. ■

Takeaways

- *U.S. milk production will expand based on both cow numbers and per-cow productivity in 2021.*
- *Rising feed costs will squeeze producers' profit margins.*
- *Milk prices and profit margins will be reduced as production outpaces demand growth.*

2020 Selig Report for Honey Bees

Jennifer A. Berry, Apicultural Research Professional and Lab Manager for the University of Georgia Honey Bee Program

2020 will end on a sour note for most, including beekeepers in Georgia. Honey production across the state was well below average, except for sourwood yields. Colony loss was equal with that experienced across the U.S. Here's the 2020 annual breakdown of our Georgia honey crops.

Gallberry, located in the flatlands of Eastern Georgia, is usually one of Georgia's most abundant honey crops. Due to its light color, slow rate of crystallization and pleasant flavor, it is a great honey for packing and a favorite among consumers. However, the 2020 gallberry honey flow was well below average. Due to gallberry blooming earlier than normal, pure gallberry was difficult to find. Some regions produced little to none, while others saw below average flows. Weather was partly to blame for the low yields, but habitat deterioration where gallberry thrives is becoming more of an issue each year. Wholesale pricing for a barrel in 2020 was roughly \$2.15/pound, which has remained the same for several years.

Wildflower nectar flows in both the north and south were below average. Commercial beekeepers blamed the weather, as rain moved in during the bloom and contributed to minimal yields. Wholesale wildflower price for 2020 was slightly below gallberry at \$2.10/pound.

Yields of tupelo honey were once again extremely poor for 2020. Rain and cooler temperatures at the wrong time contributed to the lower yields, along with a decrease in trees due to habitat disturbance. Wholesale prices for tupelo honey in 2019 jumped to \$7.50 per pound due to reduced amounts that were available; however, the market could not maintain those prices. The higher prices decreased demand for tupelo honey from consumers, which wasn't good for producers. 2020 saw prices drop to \$4.50/pound for tupelo. There is still 2019 tupelo honey on the shelves due to the large increase in pricing last year.

Finally, there is some good news for 2020. Sourwood flows in north Georgia were well above average. At first it was not looking promising, and most beekeepers were starting to give up on a good sourwood year. The norm is for sourwood flows to be unpredictable from year to year and/or region to region but regardless, the flow is usually underway by July 4. This year the flow didn't begin until the July 10. However, once the nectar flow did start, it was strong for more than 10 days in some areas. Price per drum of sourwood in 2020 was \$6.00/pound, with retail averaging around \$10.00/pound.

Reports of colony failure were the same as last year, with commercial operations experiencing a 20 to 30% loss. Some backyard beekeepers continue to show extreme losses, some as high as 80%. The number one reason honey bee colonies die is due to an ectoparasitic mite, *Varroa destructor*. This is not only an issue in Georgia, but worldwide. If mite populations are not maintained below the economic threshold, colonies will perish. Many backyard beekeepers either don't have the knowledge or the expertise to deal with such a formidable pest. Even some commercial beekeepers who have been

keeping bees for decades have difficulty dealing with this parasite.

Starvation is considered the second reason colonies die. Lack of honey stores in most colonies across the state is due to poor weather conditions during the nectar flow and/or too much honey being taken for extraction. In some regions of the state that experienced low nectar yields, colonies will be light on honey stores. If beekeepers have not been 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.

There is still a keen interest in beekeeping, which is adding to the number of backyard-to-commercial beekeepers in the state; in turn, beekeeping clubs and associations are still increasing, with more than 45 organizations in Georgia. Indications are the 2021 season will follow the same trend, with an increase in bee and queen sales; 2021 prices for a three-pound package of bees, with a queen, are averaging around \$105 to \$120 per package. Nucleus colonies, complete with bees, brood, honey, pollen and a queen are ranging from \$175 to \$250 depending on location and when the bees will be ready for sale. ■

Takeaways

- *There are four different types of honey produced in Georgia: sourwood, tupelo, gallberry and wildflower. Honey production overall for 2020 was below average for the state, with each source, except sourwood, fluctuating below average. Sourwood flows finally saw above average amounts.*
- *Colony losses for commercial operations remains at 20 to 30%, with backyard beekeepers, in some cases, experiencing losses above 80%.*
- *Varroa destructor (parasitic mites) and starvation remain the leading cause of colony loss in Georgia and nationally.*

Timber Situation and Outlook

Tyler Reeves, Amanda Lang, Brooks Mendell, Forisk Consulting

Joe Parsons, Harley Langdale Jr. Center for Forest Business, Warnell School of Forestry and Natural Resources, University of Georgia

The U.S. economic outlook appears optimistic heading into 2021. Recent developments, including the COVID-19 vaccine rollout and stimulus payments, buoyed the market from pandemic-induced lows earlier in 2020. Real Gross Domestic Product (GDP) increased at a 33.1% annualized rate in the third quarter of 2020, up sharply from a 31.4% annualized decline in the second quarter.¹ While GDP growth for 2020 expects to be near -2.2%, the positive momentum from the fourth quarter looks to spill into 2021 at a forecasted 4.5% 2021 growth rate.² The Federal Open Market Committee (FOMC) maintained its target federal funds rate at 0-0.25% to close the year in further efforts to stimulate the economy.³ Rates are expected to remain low for the next several years.

The housing industry rebounded in the second half of 2020. During the first half of the year housing starts forecasts were between 1.1 million to 1.2 million starts on an annual basis, dampened by the effects of the pandemic. However, a stronger-than-expected home renovation push helped rally the industry. Underlying demand — based on demographics, household growth, second home ownership, and net replacement level of existing housing stock — is expected to be favorable moving forward. Overall, housing starts for 2020 are forecast to increase 5% from 2019 actuals to 1.354 million. Housing starts are forecast to hit a long-term trend of 1.5 million starts by 2024.^{1,4}

Commodity Prices

Commodity prices have mixed results and vary by end product. Softwood lumber prices reached record levels in both August and September. The Random Lengths Southern Pine Composite price closed the third quarter of 2020 at \$883 per thousand board foot (mbf). This represents a \$527 (148%) year-over-year increase from close of third quarter 2019. Additionally, the

Random Lengths Framing Lumber composite closed the third quarter of 2020 at a price of \$947 per mbf, a \$581 (159%) year-over-year increase. Pandemic-induced shutdowns at many softwood lumber facilities resulted in temporary supply constraints, driving lumber prices to record levels.⁵

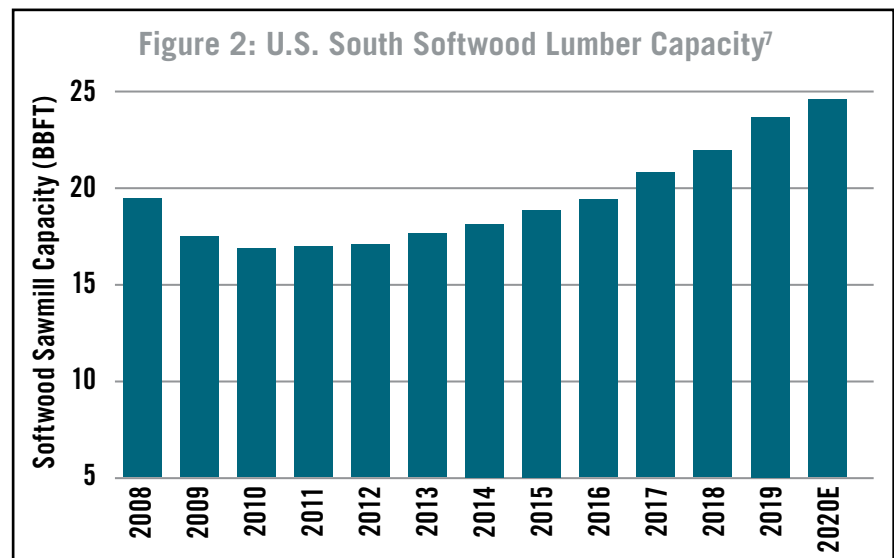
Prices for virgin fiber pulp products have moderated from falling prices in 2019 but remain down year-over-year. Prices for recycled pulp products rose considerably to start the year, moderated, but remain high compared to 2019 prices. Northern bleached softwood kraft closed the third quarter 2020 at \$840 per ton, a 3% year-over-year decrease from 2019. Bleached hardwood kraft closed at \$680 per ton, a 11% year-over-year decrease. Lastly, old corrugated container (OCC) prices rose \$35 from September 2019, a 108% year-over-year increase.⁵ Paper and paperboard production dropped 2% compared to levels from last year.¹

As of third quarter 2020, TimberMart-South reported an average Southern Pine sawtimber price of \$22.50 per ton. This signifies a year-over-year decrease of \$1.14 per ton in stumpage price for average pine sawtimber across

the South. Pine Pulpwood reported an average South-wide stumpage price of \$8.11, a \$0.56 decrease from \$8.67 in the third quarter of 2019.⁵ Pine sawtimber prices remained largely flat for the past decade as the region continues to work through an inventory supply overhang. While South-wide prices remain flat, stumpage prices vary by submarket. For up-to-date prices, check with your local forestry consultant or TimberMart-South.⁵

U.S. South Capacity Changes

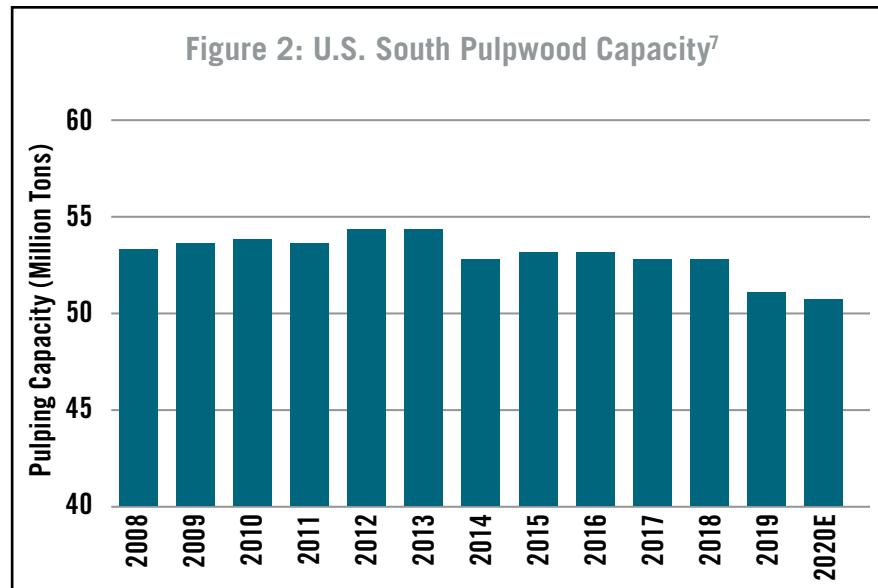
A culmination of factors led to the rise of the U.S. South as the top softwood lumber producing region in North America. These include relatively low prices for pine sawtimber, ample timber supplies, an existing and reliable infrastructure for moving wood to mills, and reduced timber supplies in Western Canada as a result of the mountain pine beetle.⁶ Southern lumber capacity currently sits around 24.5 billion board feet (BBFT) and expects to hit 25 BBFT in 2021. The U.S. South also continues to lead North America in sawmill investments, with more than \$2.2 billion in project announcements from 2019 through 2022 that expect to add more than 5.2 BBFT of capacity.^{1,6}



OTHER INDUSTRIES

Timber Situation and Outlook, *continued*

Pulpwood using capacity was adversely affected by the pandemic. At least 20% of pulp and paper capacity in North America was curtailed due to the coronavirus in third quarter 2020; in the South, 13% of capacity curtailed.¹ Reduced demand for printing and writing papers, along with newsprint paper, caused many facilities to take scheduled downtime early and/or halt production for worker-safety concerns. Despite this reduction in capacity, investment continues to flow into Southern facilities with more than \$2.5 billion in investment planned between 2020 and 2022, not including mill acquisitions. Steady growth in the packaging sector from increased e-commerce demand, along with increases in household/sanitary products, is expected to offset decreases in printing and writing along with newsprint production. The effects of increased investment are expected to be concentrated to local wood markets with little overall effects on average South-wide pulpwood price. ■



Notes

^a Virgin pulp products do not contain any recycled material and come directly from the pulp of trees or other plant materials.

^b Historically, “pulpwood” is a common name for small-sized logs that have been used primarily in pulp production but more recently have also been used for OSB and bioenergy production, particularly wood pellets.

References

- 1) Forisk. 2020. Forisk Research Quarterly: Fourth Quarter 2020. Watkinsville, GA.
- 2) Fannie Mae. 2020. U.S. Economic Forecast: December 2020, Economic and Strategic Research Group. Washington, DC.
- 3) Board of Governors of the Federal Reserve System (US), Federal Funds Target Range - Upper Limit [DFEDTARU], Federal Reserve Bank of St. Louis; Available at: <https://fred.stlouisfed.org/series/DFEDTARU>, January 5, 2021.
- 4) “U.S. Housing Starts Outlook, Q4 2020 Update: What a Long, Strange Trip It’s been” Forisk Blog posted on October 21, 2020. Available at: <https://forisk.com/blog/2020/10/21/u-s-housing-starts-outlook-q4-2020-update-what-a-long-strange-trip-its-been/>.
- 5) TimberMart-South. 2020. Market News Quarterly: 3rd Quarter 2020. TimberMart- South, Inc. 25(3). Athens, GA.
- 6) “North American Softwood Lumber Capacity Continues to Shift South” Forisk Blog posted on December 15, 2020. Available at: <https://forisk.com/blog/2020/12/15/north-american-softwood-lumber-capacity-continues-to-shift-south/>.
- 7) Forisk. 2020. Forisk North American Forest Industry Capacity Database. Watkinsville, GA.

Green Industry

Ben Campbell, Associate Professor, Department of Agricultural and Applied Economics, University of Georgia

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 and local economies. In 2020, Georgia green industry market demand and sales were extremely good for many green industry firms, given the COVID-19 pandemic and resulting quarantine, which saw many consumers undertaking home improvement projects. Campbell, Rihn, and Campbell (2020.) estimated a 2% increase in plants sales in Georgia. Furthermore, there was a change in how many consumers purchased plants, notably moving online to purchase compared to purchasing in-store (Campbell, Rihn, and Campbell, 2020b).

Though many firms experienced increased sales others were limited by their supply, as increasing supply to meet increased demand was not feasible given the time it takes to increase supply. In response, some firms sold their 2021 crops in order to meet demand. The increased demand has continued into fall 2020.

Forecasting the 2021 season is extremely complex given the number of unknowns in the economy. Economic indicators provide an idea of what 2021 will bring, however there are mixed signals in the marketplace. Housing starts are seemingly trending upward in Georgia after a slow 2020. However, housing starts are extremely geographic-specific, implying that green industry firms may experience different demand from contractors in 2021. The overall economy is an indicator of green industry growth. The 2020 U.S. gross domestic product (GDP) and gross state product (GSP) growth rates were around 1%, which is less than projected. In 2021 growth in GSP is expected to be between 3.2% and 3.1% growth rate for the U.S. and Georgia, respectively (US Government Spending, 2020). Further complicating the economic outlook is the new

Takeaways

- *2020 was a bumper year for green industry firms, with many firms seeing increased profits.*
- *There are many unknowns going into 2021 that will impact green industry sales — new presidential administration policies, the COVID-19 pandemic, economic growth and weather.*
- *Green industry sales within Georgia are projected to be lower than 2020 levels and most likely comparable to 2019 levels.*

presidential administration. Economies usually slow with a new administration regardless of party, as investors have risk due to new administration policies being implemented. Furthermore, the COVID-19 pandemic also is an unknown, given new rounds of quarantine may or may not take effect throughout the U.S.

Perhaps the biggest driver of green industry product demand is the weather. National Weather Service projections for the winter of 2020-2021 indicate above average temperatures for the southern part of Georgia, with normal temperatures for the northern part of Georgia. During the growing and main purchasing season (i.e., spring and summer), the industry should expect above average temperatures across Georgia. With respect to rain, normal rainfall is projected during winter, spring and summer 2020.

Final forecasts for 2021 should take all of the above information into account. There will likely be slower economic growth in 2021 compared to 2019, but at or on par with 2020. Many firms are likely increasing their production in order to replenish their stock and in anticipation of 2020 demand levels in 2021. However, given the uncertainty in the economy, less likelihood of broad quarantine measures and many consumers having made big purchases

in 2020, demand for green industry products will most likely be lower than 2020 levels and in the range of 2019 levels. Firms should also see consumers moving back to pre-pandemic purchasing habits if the pandemic is brought under control. ■

Travel and Tourism

*John Salazar, Coordinator for the Hospitality and Food Industry Management Program, Associate Professor
Department of Agricultural and Applied Economics, University of Georgia*

Why is travel and tourism important to Georgia?

Travel and tourism are big business in Georgia. In 2019, Georgia domestic and international travelers spent \$32.7 billion, of which \$29.5 billion was spent by domestic visitors to the state. Since 2015, domestic visitors increased spending from \$24.5 billion, reflecting a 20.1% increase in spending from 2015 thru 2019. At the core of the travel industry is the accommodations and food services sector, which generate the largest portion of travel revenues and comprise the largest share of travel-related employment. It is where the business of travel occurs and includes establishments providing customers with lodging and/or meals, snacks and beverages for immediate consumption. The sector includes both because accommodation and food services businesses often produce both activities in one establishment. In 2019, domestic travel spending in Georgia totalled \$5.1 billion in lodging and \$9.3 billion in food and beverage sales. For that same year the accommodations sector employed more than 41,000 workers, while foodservice supported more than 107,000 jobs. Combined accommodation and food services sector employment accounted for more than 57% of all travel-generated employment for 2019. However, the pandemic has had a severe impact on accommodation and food services employment. As of November 2020, Georgia year-to-date accommodation occupancy decreased almost 29% compared to 2019 and, according to the Open Table database of Georgia restaurants, seated dining in restaurants declined more than 50% compared to 2019. According to the Georgia Restaurant Association, restaurant operators reported sales being down 30% compared previous years. UGA research estimated that the March and April 2020 sector employment losses yielded a \$4.3 billion economic loss for Georgia. As of November 2020, the Georgia accommodation and food

services sector employed 49,800 fewer workers (an 11% decrease) compared to the November 2019 pre-COVID-19 employment level of 450,200. While some jobs in the sector have recovered since the start of the pandemic, it continues to lag compared to pre-pandemic levels.

How is agritourism related to Georgia travel?

Travel spending at the local level is a community-based phenomenon. Similar to the adage that all real estate is local, tourism spending within a community is local and driven by a visitor's affinity for a destination's unique set of experiences. Tourism at the community level is a public/private community collaboration among residents and organizations that can produce significant economic outputs while providing quality experiences to visitors. When Georgia competes in the national tourism marketplace, it positions various Georgia experiences that will entice individuals to visit. Agritourism is important to the state because it offers many distinct experiences for potential visitors. At the nexus of tourism and agriculture, it enhances the tourism industry by increasing the volume of visitors to an area and the length of stay.

This was made evident by the 2020 UGA Hospitality and Food Industry Management Travel Sentiment Survey of motivated Georgia travelers conducted

in collaboration with the Georgia Department of Economic Development Explore Georgia Division. This study showed that more than 54% of travelers indicated that the agricultural/rural landscape was important to them when choosing a leisure destination. More than 62% indicated they seek rural or small towns that interest them when selecting a destination, and 48% say that they seek destinations that offer farmers markets or agritourism opportunities. Lastly, more than 30% said that agritourism trails (farms, barns, orchards, etc.) were important when traveling for recreation or leisure purposes. The 2020 UGA research clearly indicated there is perceived market demand for Georgia agritourism by potential visitors.

The economics of agritourism

According the U.S. Census, a Metropolitan Statistical Area (MSA) is defined as having a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Seventy-two Georgia counties are geographically located within MSAs, while 87 counties are not aligned within an MSA and can be considered rural. While the tourism economy has grown among the Georgia MSAs, it has also significantly grown in the state's rural communities. UGA's preliminary analyses of the most recent 2019 Travel Economic Impact on Georgia State,

Takeaways

- *In 2018, Georgia hosted more than 11 million visitors*
- *Since 2014, Georgia domestic travel expenditures have grown nearly 17% from \$23.7 to \$27.9 billion in 2018*
- *Since 2014, Agritourism farm gate value has grown more than 40%*

OTHER INDUSTRIES

Travel and Tourism, *continued*

Counties and Regions showed that collective visitor expenditures among the 15 urban destinations had grown by 20.4% and rural visitor expenditures had grown by 17.8% since 2015. In 2019, counties within Georgia MSAs generated more than \$26.5 billion in total visitor expenditures while rural counties generated more than \$2.94 billion. The \$2.94 billion total for 2019 averages out to approximately \$34 million in visitor spending per rural Georgia county. Hotel occupancy in the rural counties had also increased since 2015. For the 87 rural counties, average annual hotel occupancy increased 3.9% to a 54.9% average annual hotel occupancy from 52.8% in 2015.

The number of accommodation and food services sector jobs in rural communities showed that agritourism is extremely important to the local labor market. In rural communities, the accommodation and food services sector jobs had increased 19.7% between 2013 and 2019 and, in 2019, sector jobs accounted for 7.9% of all jobs in rural communities. For Georgia urban communities, 8.5% of all jobs were related to accommodation and food services. The U.S. Department of Agriculture (USDA) designates jobs from sectors such as grain farming, vegetable farming, tree nut farming, poultry production and similar traditional agricultural production sectors and agricultural manufacturing as solely food related. In 2019, the portion of food services sector jobs from accommodations and food services alone accounted for 51% of the total Georgia rural jobs designated by the USDA as only food sector related. Consequently, both accommodation and food services are extremely important to the labor health of rural communities.

State and local communities also benefit from the associated tourism taxes collected from visitors. Since 2015, rural community state and local tourism-related tax collections had grown 20.9% to approximately \$314.9 million in 2019. Approximately 722,276 total households are located within these rural communities. Because of tourism in rural areas, the 2019 household

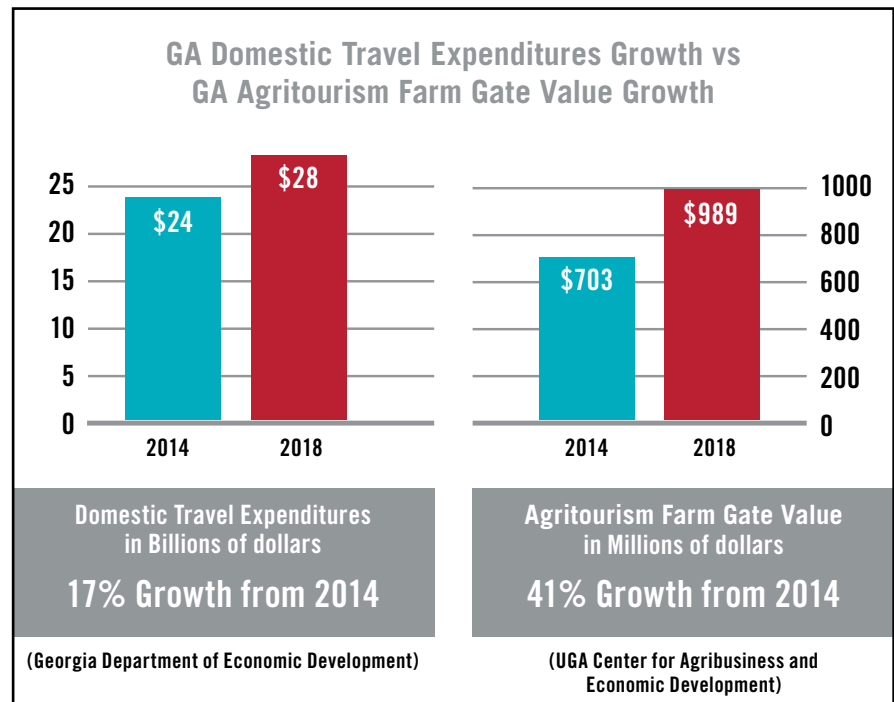
tax burden is \$435 less for each rural household.

For 2020, the COVID-19 pandemic will have impact on agritourism for Georgia. Though it is too early to estimate the pandemic's total impact, effects of the pandemic can be seen in the month-to-date (MTD) occupancy change from 2019. As of December 2020, hotel occupancy in rural counties had declined 16.7% from the previous year. However, the rural county decrease in hotel occupancy is much less than the 28.2% occupancy decrease from 2019 MTD rates for urban counties. Currently, it appears that the pandemic has had a greater toll on Georgia's accommodation sector in urban communities when compared to rural counties.

So what will the 2021 agritourism landscape look like?

Because tourism consumption is directly linked to consumer confidence, it is difficult to accurately predict the demand for Georgia agritourism. Currently, COVID-19 vaccines are being distributed, though medical experts estimate that it will be late spring or early summer before the majority of the U.S. population is vaccinated,

significantly reducing the spread of the disease. However, there are certain attributes that indicate that Georgia agritourism will rebound more quickly than other tourism segments and holds promise to be more viable compared to other Georgia tourism experiences. Leisure travel is one of the first tourism segments expected to rebound, and because agritourism is a leisure-based activity, the demand will be sooner compared to other types of non-leisure travel experiences such as business travel and the meetings and events industry. Also, agritourism activities are normally aligned with natural and outdoor recreation experiences, both of which have witnessed higher than normal demand during the pandemic. Consequently, agritourism will continue to be perceived as a "safe" travel experience compared to urban getaways and sports- and special event-related tourism, where large populations normally congregate. What is salient is that agritourism will continue to be extremely important to the economic health of the Georgia rural community for 2021. ■



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