



2019 Georgia AG FORECAST



College of Agricultural &
Environmental Sciences
UNIVERSITY OF GEORGIA

WELCOME

Agriculture is Georgia's largest industry, employing more than 380,000 in jobs which range from production to processing. It supports the state through jobs, provides Georgians with food and fiber and provides numerous other benefits that stretch far beyond our corner of the country. Agriculture is Georgia, and we at the University of Georgia College of Agricultural and Environmental Sciences are doing everything we can to support both.

The UGA Center for Agribusiness and Economic Development and the college's Department of Agricultural and Applied Economics strive to serve Georgians by providing the most up-to-date and relevant agricultural and economic information. Our faculty work to deliver quality research and analyses so you can make pertinent decisions that will enhance your agribusiness operation.

Georgia agriculture competes in a global market. Economic conditions here and overseas, as well as politics, can have a significant impact on producers here in Georgia. As we look to 2019, the new Farm Bill, trade issues with China, the aftermath of Hurricane Michael and the global economy will all play a role in agriculture, both nationally and here in Georgia. The Georgia Ag Forecast will explore the impact of these factors on Georgia agriculture.

With this in mind, we present the 12th annual "Georgia Ag Forecast Situation and Outlook Reports." These materials represent the best thinking of economists who work with the various agricultural sectors of our state. Whether you're interested in row crops, livestock, agritourism, honeybees or timber, we've compiled the impacts from 2018 and the potential for 2019. We hope the situations and outlooks addressed in this book will help you make informed business decisions for the upcoming year.

We thank our sponsors — the Georgia Department of Agriculture, Georgia Farm Bureau and AGCO — for providing the support that allows us to share research-based information from UGA to our state's citizens. This is our job now, just as it was when UGA and other land-grant universities were founded more than 150 years ago.

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2019 Georgia AG FORECAST

LETTER FROM THE DEAN



Welcome to the 2019 Georgia Ag Forecast. Any discussion of 2019 must begin with a look back to 2018. I suspect that no one could have predicted the impact of weather events on Georgia agriculture last year. Hurricane Michael left a path of destruction and heartache as it roared into southwest Georgia on Oct. 10. According to meteorologist Brad Nitz of WSB-TV, Michael was the first Category 3 hurricane to make direct landfall in Georgia in more than a century (1898). It was also the third most intense storm, as measured by barometric pressure (919 mbar), to ever hit the continental U.S. By comparison, Katrina (920 mbar) and Andrew (922 mbar) were only slightly less intense.

Estimated agricultural losses in Georgia from Michael exceed \$2.5 billion. Multiple commodities experienced catastrophic losses. University of Georgia Cooperative Extension agents, CAES agricultural economists and researchers and the UGA Center for Agribusiness and Economic Development provided estimates of the hurricane's impact within days to aid in quantifying the disaster damage. Direct loss estimates (millions \$) included:

Cotton	Dairy	Green Industry	Peanuts	Pecans	Poultry	Soybeans	Timber#	Vegetables
\$550-600	\$5.5	\$13	\$10-20	\$560*	\$28	\$10	\$763	\$480

* \$100 million nuts, \$260 million trees, \$200 million lost future income

Estimated by the Georgia Forestry Commission

The combination of weather-related losses, newly imposed tariffs and low commodity prices created a challenging economic environment. I wrote last year that anyone involved in agriculture needs to be optimistic. That statement is truer today than ever. This is not Pollyanna-ish optimism, but a conviction rooted in faith, hope, tradition and a commitment to rebuild. I hope the information you learn today will assist you in planning for the coming year.

As always, we appreciate your support, praise where it is merited and constructive criticism when we fail to do our best.

Sincerely,

A handwritten signature in black ink that reads "Sam L. Pardue". The signature is fluid and cursive.

Sam L. Pardue

Dean and Director

University of Georgia College of Agricultural and Environmental Sciences

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US and Georgia Economics

Jeffrey Humphreys

The 2019 U.S. economic forecast indicates that the economic upturn that began in the second half of 2009 will continue. The 2.5 percent rate of 2019 gross domestic product (GDP) growth will be noticeably slower than 2018's 3 percent GDP growth rate and below the 2.9 percent average of the last 50 years. In 2019, consumer spending, gross private domestic investment and industrial production will contribute to U.S. GDP growth. Indeed, investment spending by businesses is likely to grow faster in 2019 than in 2018. Government spending will be a positive factor in terms of 2019 U.S. GDP growth. The inventory swing also will be a positive factor. The main reasons that U.S. GDP growth will be slower in 2019 than in 2018: higher interest rates; tariffs and trade tensions; smaller, or negative, wealth effects; and lower levels of confidence.

The U.S. economy recently posted

the longest string of consecutive monthly jobs gains in the history of the nation. Job growth will continue. On an annual average basis, total nonfarm employment will increase by 1.3 percent in 2019, which is less than the 1.5 percent gain estimated for 2018. Job growth will be broadly based both geographically and across the major industrial sectors. One exception, however, is manufacturing, which will lose jobs. GDP growth will sustain job creation, but the pace of job growth will continue to decelerate – the annual rate of job growth peaked in 2015 at 2.1 percent. The very tight labor market and expectations of below-average top-line growth will be the main factors behind the slowdown in job growth. More positively, a larger share of new jobs will be full-time rather than part-time. Assuming that labor force participation increases slightly, net job creation

will reduce the unemployment rate from 3.8 percent to 3.5 percent on an annual average basis, which is beyond full employment.

Personal consumption expenditures will grow by about 2 percent in 2019, which is slower than in 2014 through 2018. Continuing, albeit slower, job creation will ensure that the economy continues to operate past full employment, prompting faster wage and salary growth as well as gains in hours worked. The job gains, reinforced by higher pay and low interest rates, will bolster household balance sheets. Improved labor and housing market conditions give consumers the confidence to spend on new and existing homes, but stock market volatility reduces consumers' confidence in the economic situation. The net effect is lower confidence in 2019. Credit will be available to households, but credit also will

UNITED STATES BASELINE FORECAST, 2018-2019

	2014	2015	2016	2017	2018	2019
Gross domestic product in billions of 2012 dollars	16,899.8	17,386.7	17,659.2	18,050.7	18,592.2	19,057.0
Percent change	2.5	2.9	1.6	2.2	3.0	2.5
Nonfarm employment (millions)	139.0	141.8	144.4	146.6	148.8	150.8
Percent change	1.9	2.1	1.8	1.6	1.5	1.3
Personal income, billions of 2012 dollars	14,573.8	15,243.0	15,469.9	15,867.3	16,286.5	16,636.7
Percent change	4.2	4.6	1.5	2.6	2.6	2.2
Personal income, billions of dollars	14,991.8	15,719.5	16,125.1	16,830.9	17,655.6	18,450.1
Percent change	5.7	4.9	2.6	4.4	4.9	4.5
Civilian Unemployment Rate (%)	6.2	5.3	4.9	4.4	3.8	3.5
CPI-U, Annual % Change	1.6	0.1	1.3	2.1	2.7	2.5

Source: The Selig Center for Economic Growth, Terry College of Business, The University of Georgia

be more expensive. Wealth-effect spending will be either much smaller or entirely absent in 2019.

Due to strong labor market conditions, credit markets will continue to expand. Traditional lenders will continue to loosen lending for home mortgages, but will tighten lending for automobile loans due to rising default rates. Many households have already locked in historically low mortgage rates, which will discourage refinancing activity. Nonetheless, consumers will take on more home equity debt. The proportion of homeowners who extract cash from the refinancing of their home mortgages will rise. Credit card debt will expand faster in 2019 than in 2018 as lenders continue to push into market segments with lower credit scores. Finance-technology startups will rapidly expand subprime lending to customers with poor credit ratings. Credit card default rates, therefore, will continue to rise. Lenders will probably begin to tighten lending for bank-card credit in late 2019 or early 2020.

The Federal Reserve's monetary policy stance will be restrictive as it raises short-term policy interest rates above the rate of inflation. The federal funds rate target is likely to reach 3.0 percent in December 2019. The U.S. dollar's value is quite high, which limits prospects for U.S. exports. The U.S. dollar appreciation will continue throughout 2019, but additional appreciation of the dollar will be minor compared to what has already transpired. Due to a stronger dollar, slower foreign economic growth and trade tensions, exports will grow more slowly in 2019 than in recent years. Because imports will grow faster than exports, net exports will subtract from U.S.

GDP growth. The 2019 subtraction will be larger than in 2018.

Georgia outlook

The 2019 Georgia economic outlook is very positive. Georgia's economy will continue to expand and will grow faster than the nation's economy for the sixth straight year. It also is encouraging that Georgia's economic growth is forecast to be widespread and very well-balanced. For example, Georgia will see job growth in all of its 14 metropolitan areas and in all of its major industries because Georgia will benefit from multiple, reliable sources of economic growth, including an economic development pipeline that is chock-full of projects, favorable demographic trends, more homebuilding and real estate development, higher defense spending, continuing fiscal stimulus from recent federal tax cuts, and faster productivity growth. Collectively, these forces will be slightly stronger in 2019 than in 2018, but the main economic headwinds will intensify even more. For example, higher interest rates and tighter labor markets will impede growth. On balance, because of these more intense economic headwinds, the pace of Georgia's economic growth will be slower in 2019, but not too much slower.

It is also good news that the excesses and imbalances that invariably develop over the course of the business cycle and make the economy vulnerable to recession have been very slow to develop. That is probably because of both the severity of the Great Recession and the below-average pace of economic growth over the course of the nine-year expansion. Of course, some excesses developed. The main imbalances are tight labor

markets, too much leveraged lending to nonfinancial businesses, high asset prices and high federal budget deficits. Still, for this late stage of the business cycle, the economy is surprisingly well-balanced. The risk of a recession in 2019 is 30 percent.

In 2019, Georgia's inflation-adjusted GDP will grow by 3 percent, which is smaller than the 3.5 percent growth estimated for 2018 but higher than the 2.5 percent growth rate estimated for U.S. GDP. The pattern for personal income will be similar. Georgia's personal income will grow by 4.9 percent in 2019 compared to 5.4 percent for 2018. Still, it will exceed the 4.5 percent gain expected for U.S. personal income growth in 2019.

Georgia's employment will rise by 1.5 percent in 2019. That is slightly smaller than the 1.7 percent gain estimated for 2018, but it exceeds the 1.3 percent gain estimated for the U.S. The pattern of job growth across Georgia's major industries established from 2015 to 2018 will repeat in 2019. The fastest job growth will occur in construction, followed by education and health services, leisure and hospitality, professional and business services, and mining and logging. Solid, but below-average growth will occur in manufacturing, financial activities, trade, transportation and utilities. Information and government will see positive, but very slow, job growth. None of Georgia's major economic sectors will lose jobs in 2019.

Georgia's unemployment rate for 2019 will average 3.7 percent, or about 0.4 percentage points lower than the rate estimated for 2018. The 2019 U.S. unemployment rate will average 3.5 percent. The very tight labor market will prompt faster growth in wages and salaries.

U.S. AND GEORGIA ECONOMICS, continued

In contrast, both job growth and GDP growth will slow because it will become more difficult to fill open positions. On the plus side, wage and salary hikes will benefit lower-paid occupations that did not benefit too much from the earlier stages of this economic expansion. Georgia's unemployment rate will not come down very much more in 2019 due to increases in labor force participation as well as the slowdown in overall job growth.

The prospects for Georgia's metropolitan areas are good, but their recent performance and forecasts differ substantially. The differences across metro areas are not surprising given the large differences in labor markets, industrial bases, population trends and other factors. In 2019, Augusta and Gainesville will experience the fastest job growth. Athens and Atlanta will see average to slightly above-average job growth. Among Georgia's metro areas, Albany will see the slowest job growth, reflecting several of the same factors that will cause rural Georgia to experience below-average growth.

The availability of a skilled workforce, easy access to quality research centers or educational institutions that transfer new ideas and technologies to local businesses, and the strength of the innovation ecosystem increasingly determine differences in economic performance. Augusta is a great example. The build-out of the U.S. Army Cyber Command, the 2018 opening of the Georgia Cyber Innovation and Training Center, and strong postsecondary education institutions are major positives for Augusta. An increasing proportion of Augusta's jobs will be highly skilled, high-paying, innovation-based jobs. On a larger scale, similar trends are

playing out in Atlanta. New jobs will be plentiful due to Atlanta's growing role as one of the nation's premier innovation hubs. Atlanta's high-tech development depends on the area's high concentration of college-educated workers, business partners, cyber security and high-tech companies as well as easy access to quality universities. The innovation ecosystem in Midtown Atlanta is extremely strong. This brain hub recently attained sufficient critical mass such that social interactions among high-tech leaders and high-tech workers are spurring innovation, creativity and productivity. In Athens, the University of Georgia's expanded mission in both engineering and medicine are transformational developments that are likely to ignite innovation-based growth. To sustain and spread the benefits of these virtuous cycles, Georgia's top priority should be doing what it takes to attract and nurture the world's most innovative labor force, innovators and entrepreneurs.

The abundance of projects in the economic development pipeline will be one of the main drivers of Georgia's growth in 2019. Site consultants recently ranked Georgia as the top state in which to do business for the fifth straight year. Thus, it is not surprising that Georgia's economic development pipeline is full of projects. In addition, because it often takes many years to build out the typical economic development project, many of the projects announced over the last five years will provide a substantial tailwind to Georgia's economic growth in 2019 and beyond. In addition, new projects will enter Georgia's economic development pipeline. A great deal of the credit for landing

so many economic development projects goes to Georgia's economic development professionals.

Some of the major projects announced in 2018 include Fox Factory Holding Corp., BlackRock, thyssenkrupp Elevator Americas Business Unit, Global Callcenter Solutions, Hanwha Q CELLS Korea, Starbucks, Instacart, Taurus USA and Saddle Creek Logistics Services. The build-out of new headquarters projects is also an important factor in Georgia's economic growth. In fact, 26 companies with headquarters in Atlanta rank in the 2018 Fortune 1000, placing Atlanta behind only New York City and Houston in terms of U.S. metro areas that house Fortune 1000 companies' headquarters.

Population growth will drive Georgia's growth. Corporate relocations and expansions bring more people to Georgia. The trend of higher migration to Georgia will persist in 2019. Georgia's population will grow faster than the nation's, 1.5 percent for Georgia versus 0.7 percent for the U.S. Net domestic migration rose from a net loss of 5,392 people in 2013 to a gain of 42,600 people in 2018. Georgia is a very attractive destination for midcareer or top-career movers as well as retirees. Georgia's higher rate of population growth also depends on net international migration of about 25,000 people per year.

Homebuilding and real estate development will also drive Georgia's growth. Although sales of existing homes have peaked, sales of new homes and new-home construction will increase in 2019. That dynamic is very positive for growth because new-home construction and new-home sales contribute substantially more to the state GDP than sales

of existing homes. Job growth, improving demographics and the limited supply of older homes on the market will boost new home construction by 9 percent in 2019.

On average, Georgia's existing home prices are 8 percent higher than their pre-recession peak, but the degree of home price appreciation varies widely within the state. For example, on average, existing home prices in the Atlanta metropolitan statistical area (MSA) are 17 percent higher than their pre-recession peak levels. In contrast, existing home prices in rural Georgia are 2 percent below their pre-recession peak values. Home price appreciation will continue through 2019, but existing home prices will rise by only about 4 percent.

Higher defense spending will be another economic driver in 2019. The near-term prospects for defense spending and the communities that host Georgia's major military installations are very bright. The Bipartisan Budget Act of 2018 increased the Department of Defense's 2019 budget by \$85 billion. Federal military personnel will get their largest annual pay raise since 2010. These increases are especially important to Georgia. Georgia ranks ninth nationally by total defense spending, seventh by personnel spending and fifth by personnel numbers. Spending by personnel will be concentrated in Muscogee, Liberty, Richmond, Houston and Chatham counties, where four out of every five of Georgia's military personnel are located. Spending by the Department of Veterans Affairs (VA) is also rising rapidly – by 10 percent in 2018 – and the economic benefits of the VA's spending will be felt more evenly across Georgia. Defense contractors should also do well in 2019. Georgia's

top defense contract locations are Cobb, Houston, Fulton, Richmond and Chattahoochee counties.

Federal tax cuts significantly boosted economic growth and job creation in 2018 and will do so again in 2019. More specifically, the Tax Cut and Jobs Act of 2017 and greater spending by the federal government added about 0.7 percentage points to GDP growth in 2018 and will add about the same to GDP growth in 2019. This federal fiscal stimulus will push the economy to operate above its long-term potential rate of growth. The U.S. unemployment rate will hit its lowest level in almost 50 years, boosting confidence on the part of consumers, businesses and investors.

Even with the positive macroeconomic feedback from lower taxes, including 0.7 percent faster GDP growth, the combination of higher spending and lower taxes caused the federal budget deficit to rise from \$666 billion in 2017 to \$782 billion in 2018. After taking into account the positive economic benefits of the tax cuts on revenue collections, the federal budget deficit is expected to exceed \$1 trillion in 2019 – about 5 percent of GDP. The bigger federal government debt burden will not trigger a recession any time soon, but it will limit the federal government's ability to use fiscal policy to counter recessionary forces should they bear down on the economy in the future. In addition, it is important to note that most of the tax cuts for individuals expire in 2026. Unless revised, the 2026 fiscal cliff will create a large drag on the economy at that time.

Since the Great Recession ended, productivity growth has not been very impressive. That is poised to change, which boosts prospects for growth. The tight labor market

will encourage employers to invest more in labor-saving equipment and processes. The scarcity of workers will also encourage employers to use workers more efficiently. Less federal government regulation is likely, which should eventually boost productivity growth substantially. Increased business formations also should boost productivity growth because new businesses tend to be more productive than established firms. Recent shifts in government tax and spending policies support investment spending in both the private and public sectors, which should boost productivity growth. Finally, the Federal Reserve's step back from easy money will remove a prop that probably had the unintended consequences of supporting relatively unproductive economic activities.

Unfortunately, the increase in productivity growth will not be too dramatic because some of the counterforces may intensify. For example, tariffs, trade tensions and a less-liberal immigration policy limit productivity growth. On the other hand, productivity growth, economic growth and living standards will rise even faster than expected if policymakers focus more on improving the innovation ecosystem by spending more on higher education and research and development. Increasingly, the scarce factor is talent rather than capital. The payoff from a more highly skilled workforce could be huge.

As always, some headwinds will slow growth: tariffs and trade tensions, higher interest rates, and tighter labor markets. Trade tensions are high and nobody really knows how the trade war is going to play out. This adds considerable risk to the outlook. The forecast assumes that a full-blown trade war

U.S. AND GEORGIA ECONOMICS, continued

with trading partners is avoided but that trade tensions remain high. Tariffs and other administrative barriers to international trade create uncertainty, raise costs, lower productivity and disrupt established supply chains. The trade war constitutes both an economic headwind and recession risk. Although not expected, a full-blown trade war could shock both the U.S. and Georgia economies into recession. Georgia is the nation's 11th-largest export state and the seventh-largest import state. The state has an outsized transportation, distribution and logistics industry focused on international trade. Georgia's large manufacturing and agriculture industries also depend very heavily on easy access to global markets. Georgia, therefore, is extremely vulnerable to any major step back from globalization. On the contrary, more favorable trade terms as seen in the negotiations of the North American Free Trade Agreement (NAFTA) could boost Georgia's exports and enhance the prospects for its transportation and logistics industry.

Higher interest rates constitute the second-strongest headwind. In 2019, the Federal Reserve's monetary policy stance will become restrictive as it raises short-term policy interest rates. For the first time since the recovery began, the inflation-adjusted federal funds rate will be positive. Specifically, the federal funds rate is expected to be 3.0 percent in December 2019. At that time, inflation will be only 2.5 percent. An inversion of the yield curve in 2019 is possible, but this is not the most likely scenario. An inverted yield curve exists when short-term interest rates exceed long-term interest rates, which encourages

creditors to reduce lending because they can no longer make money by borrowing short and lending long. Any contraction in consumer credit reduces the prospects for growth and increases the chances of recession. On average, an inverted yield curve leads a recession by 15 months. An inversion in 2019 implies a recession in 2020 or 2021, but it is not a perfect predictor of recession.

This ongoing transition in Federal Reserve policy from accommodative, to neutral (in 2018), to restrictive (in 2019) creates slightly more drag for Georgia than for the nation as a whole because Georgians carry relatively more debt and have relatively less savings. In addition, interest-sensitive economic sectors such as real estate development, homebuilding and building-materials manufacturing have a greater impact on Georgia's overall growth than on the nation's overall growth.

The low unemployment rate is a headwind. Although it is a great problem to have in many ways, Georgia's extremely tight labor market will slow economic growth in 2019. It is simply getting very difficult to find workers to fill open positions. It is especially difficult to find workers with specialized training or educational requirements. The migration of workers from other states into Georgia will add to the supply of workers in Georgia, but falling unemployment rates in the states that typically send workers to Georgia will limit the inflow. At the federal level, the stricter issuance of long-term work visas (H-1B) limits Georgia employers' abilities to attract top international talent. Georgia's fast-growing innovation hubs will not be able to find enough workers to grow as fast as they would prefer. The bottom line is that Georgia's

low unemployment rate and stricter issuance of H-1B visas will be speed bumps for Georgia's economy.

Some excesses have developed that make the economy more vulnerable to an unexpected shock or major policy blunder than was true earlier in the economic expansion. For example, highly leveraged businesses have taken on considerable debt. These leveraged loans typically have floating interest rates and are therefore vulnerable to interest-rate shock. Many of these highly leveraged loans are securitized, but that did not avert the crisis in subprime mortgage lending. A related risk involves the large size of the junk corporate bond market. Excessive risk-taking is clearly taking place in these two areas of the financial system, which makes the economy increasingly vulnerable to recession should interest rates rise significantly faster than expected. Another risk is that stock market valuations are high and vulnerable to correction. Oil price shocks and contagion from financial panics originating overseas are perennial risks, both of which seem to be more likely in 2019 than in recent years.

In summation, Georgia's economic outlook is good. Once again, Georgia will outperform the nation. Georgia's prospects for growth reflect a pipeline full of economic development projects, favorable demographics, more homebuilding, more defense spending, continuing fiscal stimulus from federal tax cuts and faster productivity growth. Absent a full-blown trade war, the risk of a 2019 recession is low. Absent major shocks or policy mistakes, the current expansion could continue for some time.

2018 Farm Bill Overview

Ben Campbell, Esendugue Greg Fonsah, Yangxuan Liu and Adam N. Rabinowitz

In December 2018, the U.S. Congress passed the Agriculture Improvement Act of 2018 (2018 U.S. Farm Bill). The farm bill was signed into law by President Donald Trump on December 20, 2018. We have outlined the sections of the new farm bill that are relevant to Georgia row crops, dairy, horticulture and the green industry. As we learn more about the precise rules and regulations related to the bill, more information will be made available. We encourage those interested in obtaining additional information to visit the UGA Extension agricultural and applied economics policy webpage at <http://agecon.uga.edu/extension/policy.html> and to subscribe to our Food, Agriculture, and Resource Economics blog at <https://fareblog.uga.edu>.

Row Crops

The 2018 Farm Bill continues programs for Title I commodities from the 2014 Farm Bill: the Agriculture Risk Coverage (ARC) program, the Price Loss Coverage (PLC) program, and the Marketing Assistance Loans (MAL) program with Loan Deficiency Payments (LDP).

One of the key changes is the election between the ARC and PLC. In the 2014 Farm Bill, a one-time election was made by producers, which could not be changed during the five years of the farm bill. In the 2018 Farm Bill, the initial election will be in 2019 for the 2019 and 2020 crop years. Beginning with the 2021 crop year, producers are allowed to annually change their ARC/PLC

program elections.

Changes made to the PLC program include a new effective reference price and updated PLC program yields. The statutory PLC reference prices for Title I commodities remain the same as in the 2014 Farm Bill with seed cotton added. The effective reference price permits the reference price to increase up to 115 percent of the statutory reference price. At the sole discretion of the owner of a farm, the owner shall have a one-time opportunity to update the PLC payment yield, on a covered-commodity-by-covered-commodity basis.

The 2018 Farm Bill includes changes to the ARC program. Beginning in 2019, ARC-County (ARC-CO) payments will be based on the physical location of the farm, with farms that cross multiple counties being prorated into each county. For the calculation of yields for the ARC-CO program, the five-year Olympic average yield will use either the county average yield or 80 percent of the county transitional yield, whichever is higher for that year.

Loan rates for the MAL program have increased for most commodities, except peanuts. Peanuts maintain the \$355/ton loan rate and cotton will have a factor in limiting year-to-year variability. Payment limits are still \$125,000 with a separate payment limit for peanuts. First cousins, nieces and nephews are now included in the family members eligible for payments. Adjusted gross income limits remain at \$900,000 per person or legal entity.

Dairy

The dairy policy provisions in the 2018 Farm Bill renames the Margin Protection Program for Dairy Producers (MPP-Dairy) to the Dairy Margin Coverage Program (DMC). The DMC allows for an increase in the Tier-I-covered milk production history from 4 million pounds to 5 million pounds while also significantly reducing the premiums and creating a higher coverage margin (up to \$9.50/hundreweight). The share of production history that can be covered has widened in range from 5 percent to 95 percent. There is also a five-year sign-up discount of 25 percent for any dairy that signs up in 2019 for the life of the farm bill.

Dairy farms will now be allowed to participate in both DMC and the Livestock Gross Margin (LGM) program. A premium repayment also will be provided for a dairy that participated in MPP-Dairy during 2014-2017. The secretary of agriculture will review feed costs to consider how dairy margins differ throughout the country. The Federal Milk Marketing Order Class I price mover has been redefined as the average of the Class III and Class IV prices plus \$0.74/cwt.

Horticulture

The 2018 Farm Bill did not satisfy some major sectors of the fruits and vegetable industries under Title X: Horticulture. For instance, Georgia's blueberry industry suffered a major crop loss in 2017 after a serious freeze damage and the new farm bill did not include disaster support funds

2018 FARM BILL, continued

for blueberry growers. The blueberry industry is the second largest in the fruits and nuts category of the Georgia farm gate value after pecans. One of the beneficial aspects of the farm bill is the protection of crop insurance programs. Although crop insurance is Title XI, the provisions will be useful to Title X: Horticulture, as it will cover fruits, vegetables, hops, barley and dairy farmers concomitantly.

Another importantly new aspect of the 2018 Farm Bill is Section 10113 of Title X: Horticulture. Section 10113 permits the legal production of hemp. Hemp production is forecasted to become a \$20 billion industry in the next five years. The Local Agriculture Market Program (LAMP), which includes beginning farmers or ranchers, direct producer-to-consumer marketing, family farms and food council, will receive \$50 million funding for fiscal years 2019-2023 for the authorization and appropriation of the Value Added Producer Grant (VAPG) program, whereas \$30 million is allocated for the Local Food Promotion Program (LFPP) and the Farmers Market Promotion Program (FMPP) for the same time period.

In addition, this farm bill provides \$60 million in Commodity Credit Corporation (CCC) funds to support partnership endeavors from 2019-2023, with set conditions that 47 percent of the money be utilized as farmers market and local food-promotion grants. In Section 10104, the organic certification was another gray area. This bill required specifications on organic operations that do not require certification and seeks improvements in trade tracking and data collection systems such as traceability, investigation and compliance actions.

Furthermore, although the Montreal Protocol recommends

the complete eradication of methyl bromide, the farm bill provides some flexibility by allowing the secretary of agriculture or a state, local or tribal authority to approve the use of this product in an emergency. The secretary reserves the right to approve or disapprove such requests.

Green Industry

The 2018 Farm Bill addresses major green-industry issues similar to those addressed in the 2014 Farm Bill. The new farm bill mandates research and development into crop loss policies for greenhouse and floriculture producers. Further, strategies for increasing automation and mechanization are to be developed and implemented. With respect to funding opportunities, the Rural Energy for America Program (REAP) received full funding (\$50 million annually) that can provide grants or loans for greenhouses, retailers and other rural businesses to pay for renewable energy and energy efficient improvements, including energy efficient equipment and systems. Grants can cover 25 percent of project costs with guaranteed loans covering up to 75 percent of project costs. Research and grant programs such as the Specialty Crop Research Initiative (SCRI), Specialty Crop Block Grant funds, and pest and disease research and prevention received increased funding over the previous farm bill allotments. This includes the National Clean Plant Network.

Peanuts

Adam N. Rabinowitz

Record U.S. production of 3.6 million tons of peanuts in 2017 resulted in a significant market surplus during 2018. As a result, limited contracts for the 2018 crop were offered on runner peanuts, and those that were available fluctuated around \$400 per ton. This lower peanut price, combined with a higher cotton price around planting time and the elimination of generic base acres, resulted in a significant decrease in planted acres in 2018. Total U.S. acreage was about 1.4 million acres, 23.8 percent lower than in 2017. Peanut acres in Georgia decreased 20.4 percent to 665,000 acres.

Even with reduced acres, peanut production in 2018 was generally quite strong throughout the year. The U.S. Department of Agriculture's (USDA) estimated October yields at 4,500 pounds per acre in Georgia and 4,167 pounds per acre in the U.S. This was decreased after Hurricane Michael ripped through Georgia. The USDA's November estimated yield dropped 100 pounds per acre to 4,400 pounds in Georgia. The USDA revised the total U.S. yield down to 4,066 pounds per acre. Further rains came through the Southeast that negatively affected late plantings, so final yields and harvested acres will probably end up somewhat lower than these estimates.

Overall quality of the crop was very good as determined by the Georgia Federal-State Inspection Service. The 2018 Georgia crop, as of the end of November, was 99.6 percent Segregation 1, 0.2 percent Segregation 2 and 0.2 percent Segregation 3. Similar to 2017, this indicates a quality crop with very little damage or

aflatoxin detected. One contributing factor to the Segregation 1 increase is the change in the threshold level for damaged kernels from 2.49 percent to 3.49 percent effective beginning with the 2018 harvest.

The question that remains, as of this writing, is what the final production number will be and how that will impact total stocks. If we assume the November 2018 USDA yield estimates are an upper bound, that would result in Georgia production of 1.4 million tons and U.S. production of 2.7 million tons, which represents a 21.2 percent decrease in Georgia's production and a 23.1 percent decrease in total national production. Production at this level would be about 7.6 percent lower than expected utilization during the 2018-2019 marketing year that started on Aug. 1, 2018. It is likely that production will be slightly lower than this when final numbers are released. While a demand that outpaces supply is positive news for the industry after such a large surplus the year before, there is still a large projection for ending stocks of, at most, 1.2 million tons.

When excess stocks exist in the market, exports are the most flexible avenue to use in easing the supply burden. During 2018 this was not an exception, but it was more challenging for a variety of reasons. Historically, Canada and Mexico are top buyers of peanuts. While that continued in 2018, there was uncertainty given the renegotiation of the North American Free Trade Agreement (NAFTA). While some retaliatory tariffs were placed on U.S. goods by Canada and Mexico, peanut and peanut products

were not impacted. NAFTA has since been renegotiated and representatives of the U.S., Canada and Mexico have all signed the United States-Mexico-Canada Agreement (USMCA). It is now up to legislators of each country to ratify the deal.

The first retaliatory tariff to impact the peanut industry, on peanut butter, came from the European Union (EU) in June 2018. The majority of peanut butter shipments to the EU go to Germany, and through September 2018, exports of all peanut products to Germany were only about 2 percent behind 2017. Alternatively, the Netherlands has increased their purchase of peanuts, up 33 percent from 2017, to become the third-largest export destination for U.S. peanuts.

The country's other major trade dispute in 2018 was with China. While many agricultural products had Chinese tariffs imposed on them in July, tariffs on peanuts and peanut products were only announced during that month. The Chinese retaliatory tariff did not become effective until Sept. 24, 2018. The impact of that tariff, however, is expected to be very minimal because China was effectively out of the U.S. peanut market starting in June 2018. During the four-month period of June through September 2018, China purchased only 1,215 metric tons of peanuts. Meanwhile, other buyers of U.S. peanuts purchased 155,632 metric tons during that same period. China stopped buying U.S. peanuts due to price, not trade, issues. China likes U.S. peanuts for crushing purposes, so they look for low-priced peanuts. Given that contracts were around \$450 per

PEANUTS, continued

metric ton for the 2017 crop, shellers did not have an incentive to lower the export price substantially enough to entice buying from China. This tariff, however, will make it that much more difficult for China to return to the U.S. peanut market until significantly lower export prices prevail.

Given the uncertainty in terms of trade and impacts from retaliatory tariffs in 2018, the USDA established the Market Facilitation Program (MFP) to assist agricultural producers negatively impacted by the retaliatory tariffs. The assistance for peanut producers was quite limited. There were no direct payments through the MFP. However, the USDA was approved to purchase \$12.3 million in peanut butter for distribution to nutrition assistance programs to reduce the excess supply in the market created by retaliatory tariffs. This purchase should reduce ending stocks and minimize any downward pressure on price as a result of trade disruptions.

Overall, demand is projected to stay relatively flat with a slight increase in domestic use and a slight decrease in exports expected during the 2018-2019 marketing year. Domestic food use is projected to increase 2.9 percent to 1.6 million tons. Crush use is expected to increase 30,000 tons to 383,000 tons. Meanwhile, exports are expected to drop to 600,000 tons. After factoring in seed and residual uses, total utilization is about 3 million tons. Given demand is expected to outpace production, ending stocks are projected to drop 13.7 percent.

Beyond supply and demand, government programs also affect farm income. The peanut part of the 2014 U.S. Farm Bill continues to trigger Price Loss Coverage (PLC) payments as peanut prices have stayed below the reference price of \$535 per ton. The payment rate for the 2017 crop, paid

in October 2018, was 3.85 cents per pound, or \$77 per ton, before applying any payment limits, base acreage limits and sequestration. This represents the lowest rate paid during the life of the PLC program. USDA projections for the 2018 harvest include a PLC payment rate issued in October 2019 of 5.25 cents per pound, or \$105 per ton. This payment rate may increase as much of the contracting that took place for runner peanuts was around \$400 per ton. However, the final payment depends on the entire marketing year through July 31, 2019, so more time must pass before a final payment rate is set. Factors that will contribute to this include the price of nonrunner varieties and the price paid for 2017 peanuts purchased in the 2018 marketing year. In fact, there are slightly more than 120,000 tons of peanuts from the 2017 crop that have been forfeited through the Marketing Assistance Loan Program at the \$355 rate. The October 2019 payment will also be the first that doesn't include payments on generic base acres. The Bipartisan Budget Act of 2018 eliminated generic base and converted that base to either seed cotton and/or other covered commodities based on plantings from 2009 to 2012. Many of the farmers with generic base acres received payments through the peanut program over the past four years. These payments will be replaced with payments on other combinations of base acres that may include seed cotton and peanuts as well as other covered commodities, depending on how the generic base was reallocated.

Looking ahead to 2019, consider the continued excess supply from 2017 and the relatively large ending stock projected for July 31, 2019. These signals in the market point toward the need for fewer peanuts, so expect reduced acres. This is likely to continue

to depress prices for early contracts and could increase seed costs with the intent of deterring plantings of peanuts.

A look back at recent history shows how acres and yields have fluctuated to help form some projections for the coming year. The average number of harvested acres from 2012 to 2018 came to 670,000 acres. This did, however, include a period of time when generic base acres existed and relatively lower prices prevailed for other commodities. Generic base acres are no longer, and prices of other commodities fluctuate depending on trade discussions. Without 2014 U.S. Farm Bill years as part of the average, harvested acres drop to just under 600,000 acres. Examining this behavior during the past seven years projects an upper bound of 600,000 on expected acres. This is a very early projection that will depend on prices of other commodities, such as cotton, corn and soybeans; removal of uncertainty surrounding trade; and farmers' ability to secure financing after some farming operations were devastated by Hurricane Michael.

Figure 1 shows yields from 2006 to 2018 for Georgia peanuts. This is the period during which Georgia-06G peanut variety represented the majority of the planted acres in the state. There is a large increase from 3,625 pounds per acre in 2011 to 4,580 pounds per acre in 2012. Beginning in 2012, yield has been above the 2-ton-per-acre mark in all years except 2016. The average yield during this seven-year period is 4,301 pounds per acre. Without the high and low yields during this time, the average increases to 4,325 pounds per acre. Therefore, it's reasonable to expect about an average yield of 4,300 pounds per acre.

As acreage and potential yields shift there becomes potential for swings in market prices. The last time

Georgia saw harvested acres less than 600 thousand was in 2014 when 589 thousand acres were harvested after planting 600 thousand acres. Prices received, on average, that year were \$412 per ton. That was after receiving a price of \$480 per ton the year before. The \$480 per ton price was on 426 thousand acres harvested and a yield of 4,430 pounds per acre.

Ultimately peanut farmers seek higher prices, but the market is not quite there. For prices to increase, additional demand needs to be created and/or supply needs to be constrained. Figure 2 shows the growth in demand from 2000 to 2018. Total demand was relatively flat from 2001 to 2009 before a slight increase. From 2010 to 2015, there was a steady increase in demand, but that leveled off for about four years. A need to explore new product innovations and value-added opportunities exists to help expand peanut demand. Continued marketing of the health benefits of peanut consumption compared to other

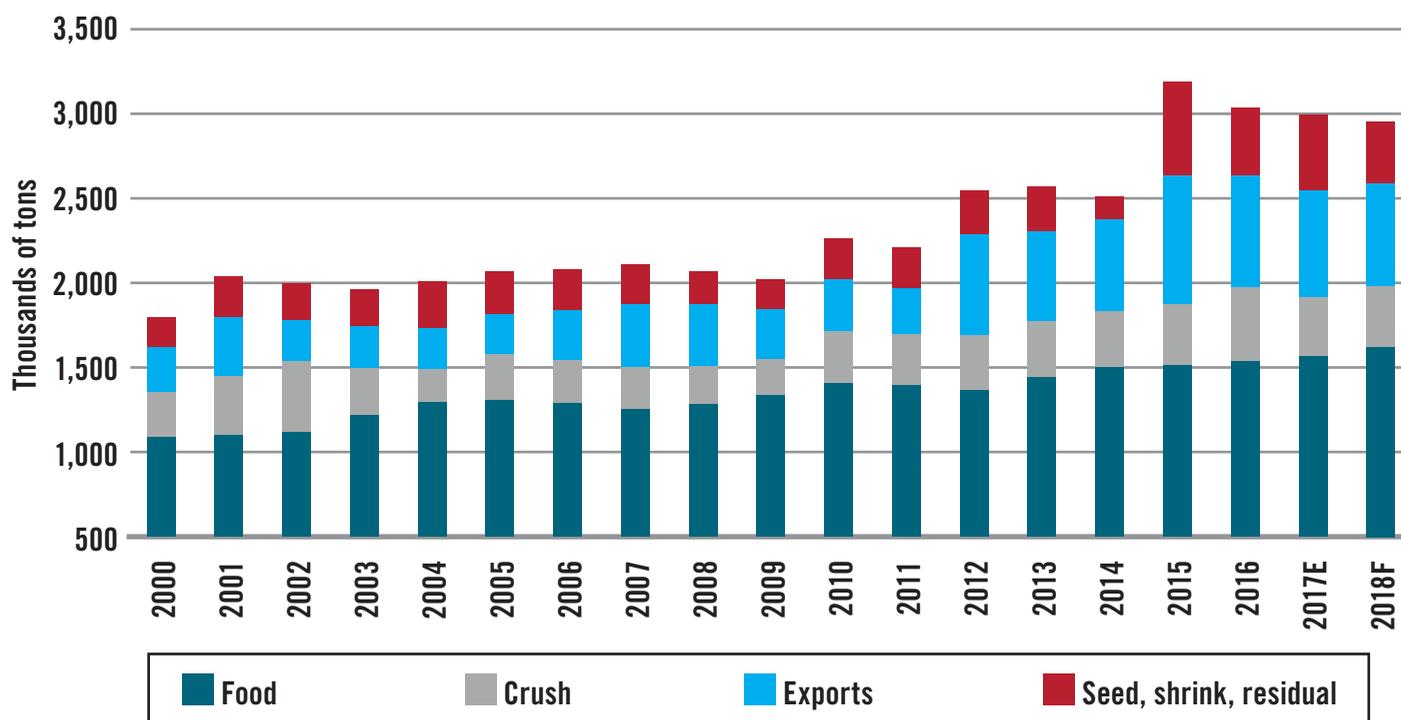
proteins would bolster demand. The export market is also key to demand and depends on a timely resolution of existing trade disputes and production in competing markets. Notably, Argentina had a very challenging 2018 harvest, which helped maintain U.S. peanut exports. As South American harvest approaches, it will become important to watch the production of peanuts in that region as it will impact U.S. exports and harvest prices of U.S. peanuts in 2019.

In addition to demand and competition, supply of U.S. peanuts is the other mechanism affecting farmer prices. Farmers need to consider rotation, market prices and available financing when deciding the number of acres they will plant for 2019. Generic base acres no longer influence this decision process. A decrease in planted acres is necessary at this point to support an increase in overall peanut price. However, a delicate balance in the extent of the decrease in acres to minimize risk to the entire peanut

industry must occur. Given that total production is a function of both acres and yield, there is a risk of planting too few acres, which may return yields to pre-2012 levels. That combination would significantly decrease ending stocks and raise prices, but it would come at the cost of shifting the peanut market into a shortage situation.

Ultimately there are many unknown factors in terms of future prices. As of late November 2018, there have been no reported contracts for 2019. A price near \$425 would not be inconceivable if acreage drops significantly, a new farm bill provides some certainty and trade disputes are resolved. When determining how to proceed with early marketing, farmers need to consider their individual risk tolerance and what makes sense for their business given their financial situations. At current market prices, one strategy might include contracting for some of the expected production and waiting for the market to develop throughout the year.

Figure 2: U.S. Peanut disappearance



Cotton

Yangxuan Liu

Several severe weather events impacted the 2018 U.S. cotton crop. Major droughts occurred in Texas, Oklahoma and Kansas, while farmers in the Southeast suffered from delayed planting due to a period of wetness and rainfall in the planting season. The 2018 crop was further impacted by two hurricanes, Hurricane Florence, which passed through the Carolinas and Virginia in September, and Hurricane Michael, which passed through Florida, Alabama and Georgia in early October. All of these severe weather events reduced the cotton supply and pushed the cotton price higher.

Producers had good marketing opportunities for the 2018 crop. The 2018 cotton prices are favorable due to the expectation of reduced supply, strong exports and improved

demand. The cash price of cotton for calendar year 2018 ranges from a low of 74.11 cents per pound to a high of 94.21 cents per pound, which was the highest reported price since 2014. Factors influencing 2019 crop prices include global economic growth, U.S. production and stock, global demand, U.S. exports and the country's trade and tariff status.

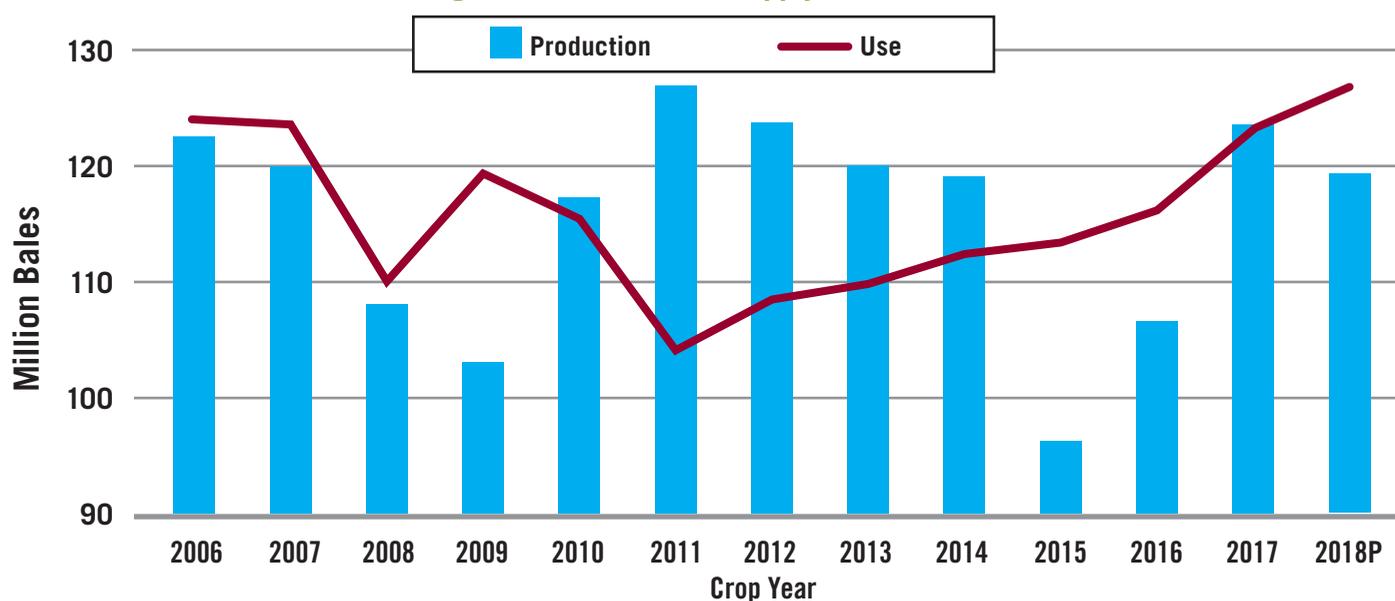
Global situation

World cotton consumption has improved significantly in recent years (Figure 1). Global cotton consumption for 2018 is projected to reach a record high of 127.8 million bales, which is 4.5 million bales above 2017. Cotton products are discretionary items, which is related to retail purchases of textile and apparel products. The consumption

of cotton goes up or down with the economy. In 2017, as the global economy strengthened, growth in cotton mill use expanded significantly, rising more than 6 percent. However, growth in cotton mill use in 2018 rose only 3.6 percent, partially reflecting concerns about global economic growth. The World Economic Outlook also projected slower long-term economic growth worldwide, which indicates a slower increase in cotton consumption.

Cotton mill use is expected to grow in China, Vietnam and Bangladesh and to decrease slightly in Turkey. The leading cotton importers—Bangladesh, Vietnam and China—are forecast to increase their import in 2018 with 8.1 million bales, 7.6 million bales and 7 million bales of imports, respectively. These increases in imports will help

Figure 1: World cotton supply and demand



support these countries' expanding textile industries. In contrast, imports are projected to decrease for Pakistan and Turkey with 2.6 million bales and 2.9 million bales, respectively.

World cotton exports are projected to expand in Brazil as their increased cotton production is expected to supply a larger share of the global cotton trade in 2018. At a record 5.5 million bales, Brazil's exports are forecast to increase approximately 32 percent above 2017. On the other hand, U.S., India and Australia exports are projected to decrease in 2018. World ending stocks are forecast at 72.6 million bales in 2018, which is 9.7 percent (7.8 million bales) below 2017 and the lowest in seven years.

U.S. acreage and production

U.S. cotton planted acreage (Figure 2) is 14.04 million, up 1.43 million from 2017 and the highest planted acreage since 2011. U.S. cotton production is forecast at 18.4 million bales for 2018, down 2.5 million bales from 2017. The reduced production is largely due to severe weather events, including droughts and hurricanes. The U.S. cotton harvested acreage totals 10.37 million acres in 2018, which indicates 26 percent abandonment, the highest rate of abandonment since 2011. U.S. ending stocks for the 2018-2019 crop year are expected to be 4.3 million bales, the same as last year.

U.S. exports

U.S. cotton exports are currently forecast to be 15 million bales for the 2018-2019 crop year, the second-highest on record. The beginning of 2018 saw outstanding large, early export sales for U.S. cotton. Together with supply uncertainties due to the drought in the Southwest and delayed planting in the Southeast, prices rallied steadily through the first and

second quarters of the year into the 90 cents per pound range. However, this pattern of unusually large export sales turned around starting in June, when the trade war between China and the U.S. intensified. Furthermore, 2018 export sales were hampered by political uncertainties in Turkey, which is another major market for U.S. cotton.

China and trade uncertainties

China is the world's largest user of cotton and now the world's third-largest cotton importer behind Bangladesh and Vietnam. Starting in 2011, the Chinese price support policy resulted in a buildup of ending stocks. In 2014, the Chinese cotton policy shifted from price supports and building government reserves to paying growers direct cash payments in order to reduce the governmental cotton reserve. China's ending stocks for 2018-2019 will continue to decrease and are forecast to total 29.9 million bales. For 2018, China has approved 800,000 tonnes (metric tons) of additional cotton import quota, which is in addition to the annual 894,000 tonnes of low tariff-rate quota that China issues as part of its commitments to the World Trade Organization. This is the first time that China has issued any additional quota since 2013.

Even though U.S. cotton faces an additional 25 percent increase in tariffs to China due to the ongoing trade dispute between U.S. and China, the U.S. cotton industry has benefited from the growth in mill use in other countries, such as Vietnam and India. If U.S. sales of cotton to China decline as a result of a Chinese tariff, it is possible that sales to mills in other countries could increase to offset part of the decline in China. A Chinese tariff on U.S. raw cotton could continue to stimulate Chinese imports of duty-free yarn from Vietnam, Pakistan, Indonesia

and the Indian subcontinent. The demand for higher-quality U.S. cotton in those markets could continue to expand. Thus, the impact of a bilateral Chinese tariff on U.S. cotton may lead to a reshuffling or rerouting of, rather than a reduction in, U.S. cotton exports.

However, China is responsible for about 40 percent of apparel imported by the U.S., and 30 percent of that apparel is made from cotton. The U.S. tariff on Chinese apparel will make it more expensive for U.S. consumers to buy cotton apparel, which would reduce the demand for apparel. That may work its way back down the supply chain to reduce Chinese demand for cotton in general and thus impact cotton demand and price. The price for U.S. cotton declined after the U.S. imposed a tariff on Chinese apparel. In the short run, this price uncertainty due to trade will persist if no agreement can be reached between the U.S. and China. In the long run, other countries might produce more apparel and export apparel to the U.S.

Georgia situation

In 2018, Georgia's farmers planted 1.43 million acres of cotton, up 150,000 acres from 2017. There are two major contributing factors to the increase in cotton acres in Georgia. First, the relatively high cotton price in 2018, especially during planting season, made cotton more competitive with other row crops. Second, the Bipartisan Budget Act of 2018 authorized seed cotton as a covered commodity and eliminated generic base and thus the eligibility for payments when planting other covered commodities on farms with generic base.

Georgia's cotton production had a very promising year until Michael hit on Oct. 10, 2018. The U.S. Department of Agriculture (USDA) National Agricultural Statistics Service, in

COTTON, continued

November, forecast an average cotton yield of 693 pounds per acre in Georgia for 2018, a decrease of 287 pounds per acre from the October forecast. The November forecast of cotton production in Georgia is 1.95 million bales as compared to the October forecast of 2.9 million bales. The initial estimates of farm gate value loss from Hurricane Michael range from \$550 million to \$600 million for the Georgia cotton industry. This includes losses related to cotton lint, cottonseed and fiber quality reductions.

Policy update

Under the 2014 U.S. Farm Bill, cotton base on a farm from the 2008 U.S. Farm Bill was converted to generic base. The Bipartisan Budget Act of 2018 established a new seed cotton program. Under this program, beginning with the 2018 crop, generic base no longer exists and landowners had to convert the generic base on a farm to seed cotton

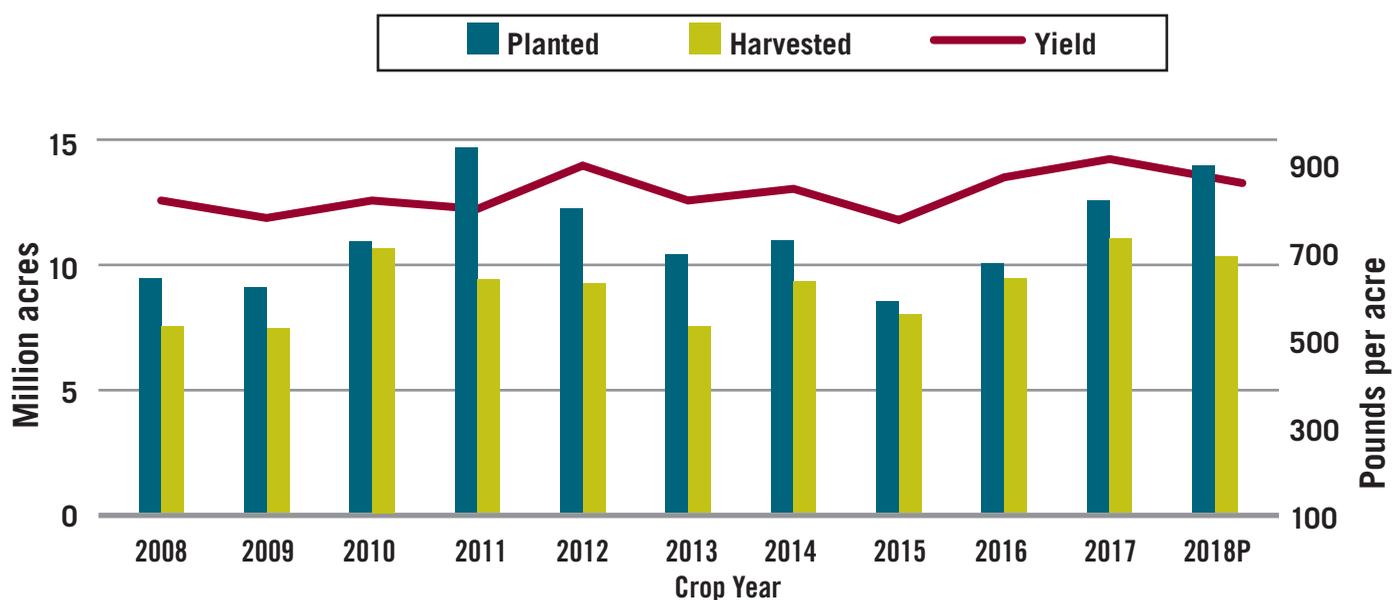
base or other covered commodities before the deadline of Dec. 7, 2018. The Bipartisan Budget Act of 2018 also authorized seed cotton as a covered commodity for the 2018 crop year and made it eligible for the Agricultural Risk Coverage (ARC)/Price Loss Coverage (PLC) program. This legislation bridges cotton between the last year of the current 2018 U.S. Farm Bill and the new farm bill for 2019-2023.

Summary and 2019 price outlook

U.S. acreage and production is likely to be up for 2019. If prices hold in the upper 70s to 80 cents or better, cotton will provide competitive net returns as compared to other row crops. Soybean price collapse due to the U.S. and China's trade dispute may increase cotton planting in the Midsouth and the Southeast. As a result, weaker prices might be a result of excess supply of cotton. As this is being written, futures prices for the 2019 crop are in the upper

70s cents per pound, down from peaks in the 90s cents per pound earlier, but seemingly comfortable in a range of mostly 77 cents to 81 cents. Producers need to be aware of the risk of downside price weakness in 2019 and need to consider forward contracting or hedging a portion of expected production for their 2019 crop. The optimistic likely price for 2019 is 69 cents to 75 cents per pound or better. The pessimistic likely price for 2019 is 65 cents to 68 cents per pound. For planning and budgeting projections, a price of 69 cents to 75 cents per pound is suggested for 2019.

Figure 2: U.S. cotton acres planted and harvested, and average yield per acre



Fruits and Nuts

Esendugue Greg Fonsah

The Georgia fruit and nut industry experienced structural, institutional and policy changes this year that will have a long-lasting impact in subsequent years. First, those in the fruit and nut industry expected to enjoy a bumper crop in 2018 and hoped the industry would surpass its 2016 farm gate value of \$745 million. Second, the pecan industry, recovering from the damage caused by Hurricane Irma in 2017, got hit again by Hurricane Michael on Oct. 10, 2018, when the harvest was set to start. Michael's strong winds and heavy rainfall affected Mitchell, Lee and Dougherty counties, the concentrated center of the Georgia pecan industry. Third, President Donald Trump replaced the North American Free Trade Agreement (NAFTA), which he opposed during his presidential campaign, with the United States-Mexico-Canada Agreement (USMCA) on Sept. 30, 2018. President Bill

Clinton implemented NAFTA in 1994. Mexico and Canada, respectively, are major import and export destination countries for the U.S.

A U.S. Department of Agriculture (USDA) Economic Research Service report indicates that the 2018 fresh fruit and nut grower price index was higher than the 2017 index and the average of 2014-2016's indexes. Reasons cited included the increased prices of citrus fruits, fresh pears and strawberries. Although Georgia is not a major strawberry-producing state, successful strawberry growers in Georgia experienced a high return on their investments because supplies from Florida and Mexico were hit by bad weather, while California growers experienced a mild winter that took a toll on their production circle and market window (Figure 1a).

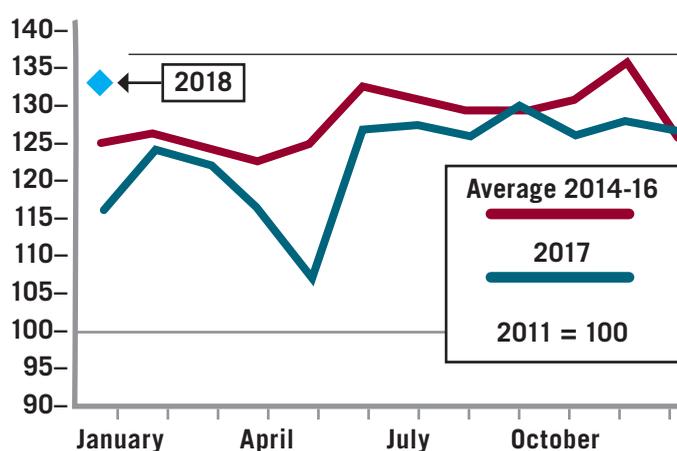
Pecans

Although the 2017-2018 pecan production projection of 277.4 million

pounds was up 3 percent from the 2016-2017 crop season, the impact of Hurricane Michael will negatively affect total production. Pecan production in Georgia, estimated to be over 100 million pounds, was seriously devastated. Increased production of native varieties in Oklahoma and Louisiana triggered the forecast 3 percent increase prior to Michael. The decline in the alternate-year pecan cycle is due to the fact that only a few states—Oklahoma, Louisiana and Texas—still produce the native varieties, which, when combined, is probably less than 10 percent of total production (Figure 2).

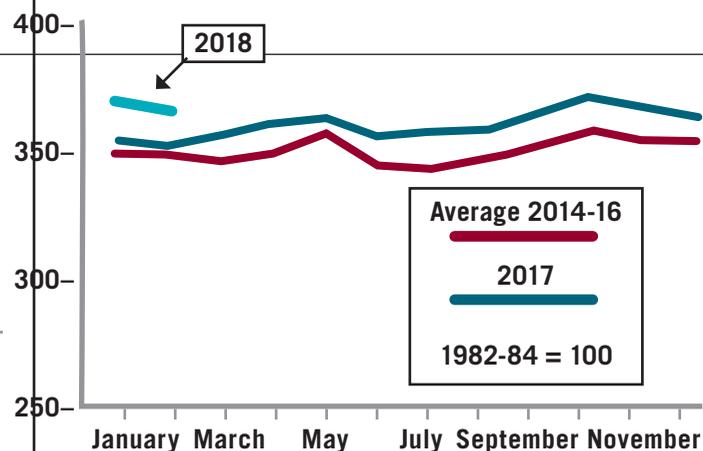
Georgia, New Mexico and Texas continue to dominate the pecan industry. Given Georgia's 25 percent decrease in pecan production last crop season because of 2017's Hurricane Irma and the estimated \$560 million in losses this year because of Hurricane Michael, the state might lose its No. 1 status to

Figure 1a: Grower price index for fruits and nuts.



Source: USDA National Agricultural Statistics Service, *Agricultural Prices*

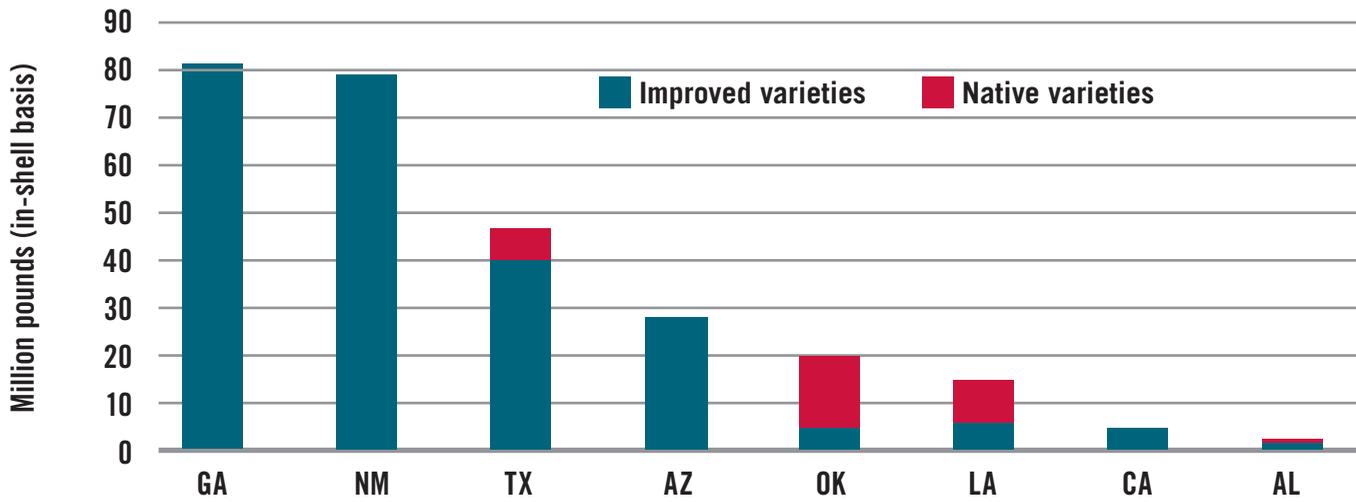
Figure 1b: Consumer price index



Source: U.S. Department of Labor, Bureau of Labor Statistics

FRUITS AND NUTS, continued

Figure 2: U.S. pecan production by state, 2017-2018 crop season



Forecast for 2017/18.

Source: USDA National Agricultural Statistics Service, *Crop Production* (October 2017 issue).

New Mexico, Georgia, New Mexico and Texas together produced 81 percent of the 2017-2018 pecan crop. California experienced a 13 percent decrease in production. Texas and New Mexico were projected to have increased production.

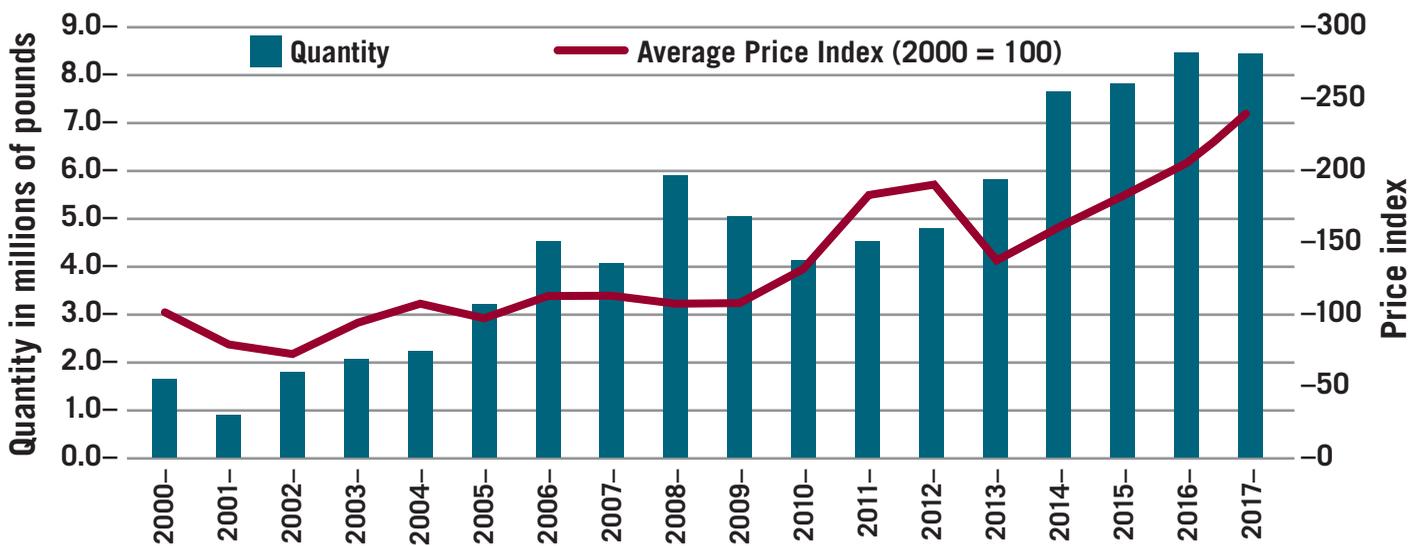
Shelled pecan exports to China, Canada, South Korea, Japan and Spain fell by 18 percent. On the other hand, in-shell nuts increased by 19

percent to China, Mexico and Japan. The current tariff war with China, the impact of Hurricane Michael on Georgia's pecan industry and the new USMCA are bound to affect the U.S. pecan market.

The USDA Foreign Agricultural Service's Global Agricultural Trade System report indicates that shelled pecan imports from Mexico increased from 10 million pounds in 2001 to

a record high of almost 85 million pounds in 2016-2017. Prices for Mexican pecans increase as the import volume increases. From 2013-2017, both price and import volume trended upward, and prices doubled during that period (Figure 3). Given the domestic shortage in pecan production caused by Hurricane Michael, Mexico may fill the gap by increasing exports to the U.S.

Table 3: Shelled pecan imports from Mexico, 2000-2017.



Source: Rabinowitz, 2018

Melons

U.S. melon production (cantaloupe, honeydew and watermelon) decreased after 2010. There was a slight increase in 2016, which quickly fell in 2017. Per capita consumption has fluctuated as well. It increased slightly from 2014-2016, then dropped in 2017. Import supply is growing exponentially and catching up with domestic production. Total melon production was 8.17 billion pounds in 2017 while per capita consumption was 25.1 pounds (Figure 4).

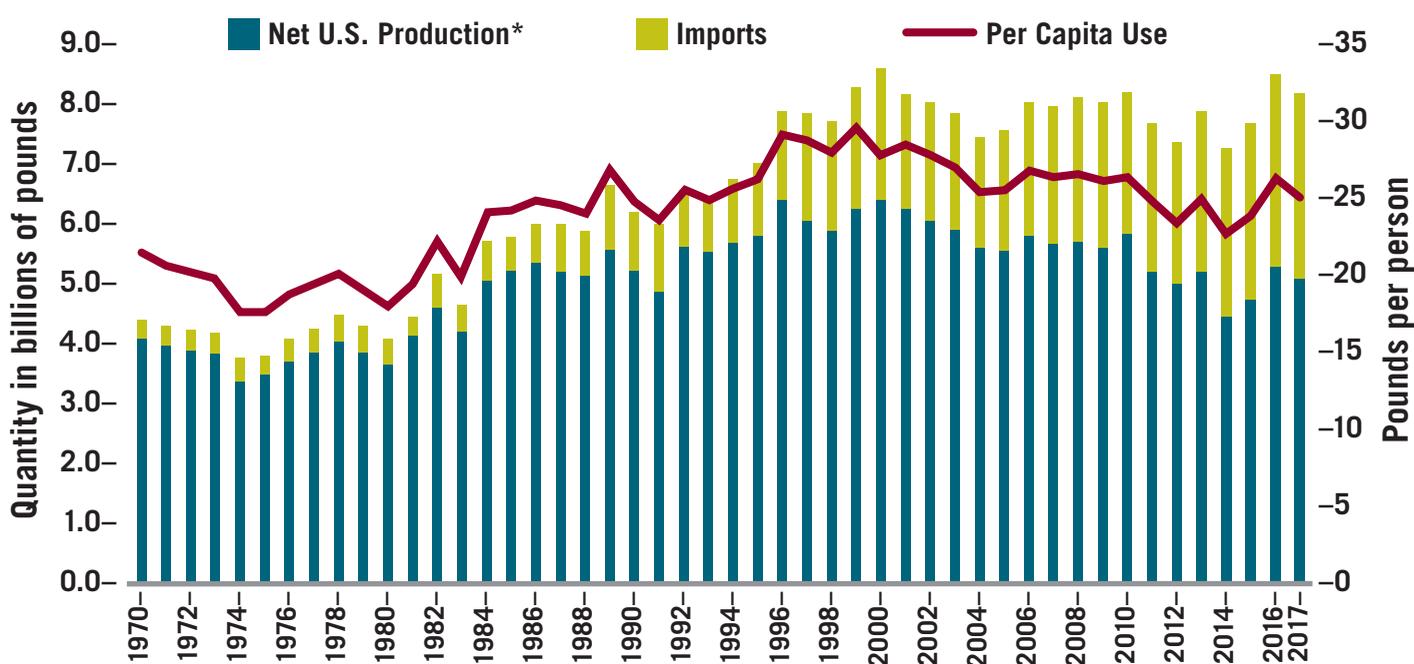
In 2017, watermelon production was 4.01 billion pounds, almost the

same as 2016's watermelon production total. Although harvested area decreased by 4 percent and import supply decreased by 7 percent, the grower's price increased by 8 percent. Production in California, Florida and Georgia increased, while the huge decline in production in other states like Texas, Arizona, Indiana, Maryland and Missouri was strong enough to suppress the impact of the top three producing states.

Despite the trend of declining watermelon production in the U.S., total imports came to 1.59 billion pounds in 2017, a 7 percent decrease when compared to 1.71 billion

pounds in 2016. On the other hand, U.S. watermelon exports fell by 3 percent in 2017 when compared to 2016, with a net value of \$82 million. Export volume to Canada, the major watermelon destination for U.S. producers, also fell. The new USMCA makes it difficult to determine what is going to happen to the industry, which has a melon export total that has floated around 600 million pounds for the past two decades.

Figure 4: U.S. PRODUCTION, IMPORT AND PER CAPITA USE OF ALL MELONS, 1970-2017.



* Domestic production minus exports.

Source: USDA Economic Research Service (ERS)

FRUITS AND NUTS, continued

Blueberries

Blueberry production, imports and per capita use started increasing in 1980, but it was not until 2001 that all three of these measures began a trend of exponential upward growth (Figure 5). Despite the increase in production, the U.S. still has to import more to meet domestic demand.

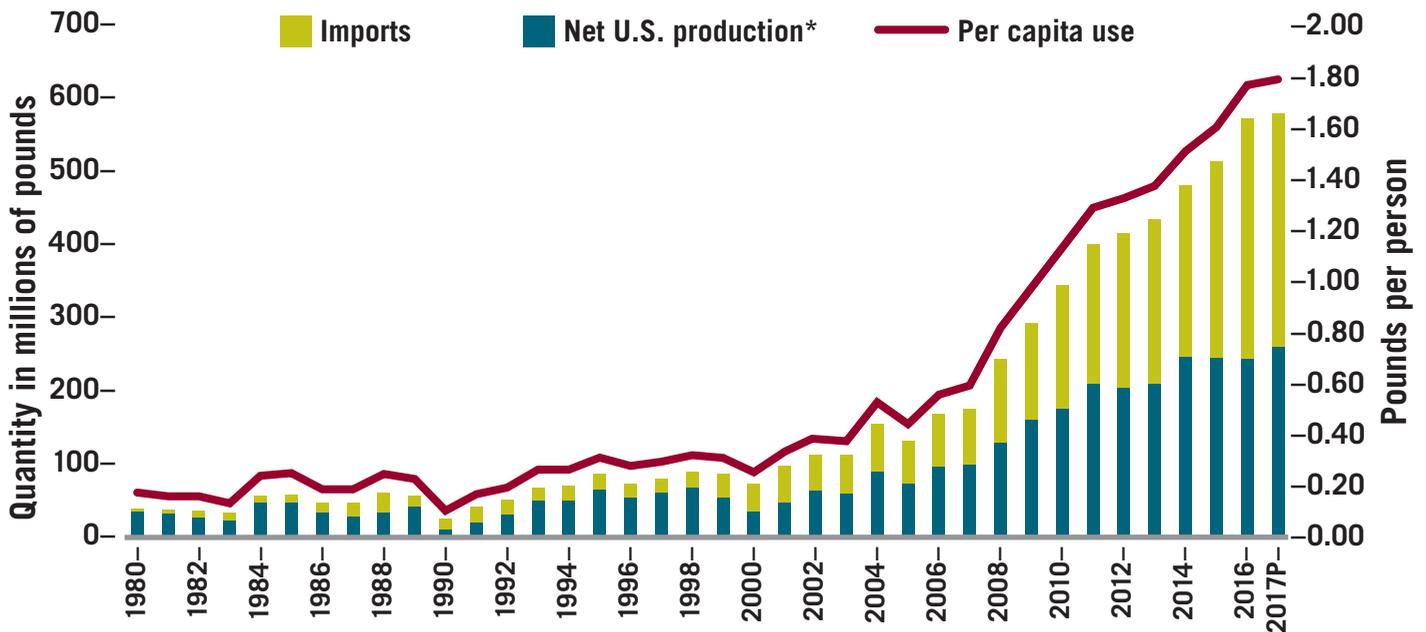
In the Southeast, Florida blueberries enter the market as early as April to May, and the Georgia crop arrives from late April to June. In

2017, Georgia's blueberry production experienced a 50 percent loss due to late spring freeze, according to a North American Blueberry Council (NABC) report. Total U.S. production experienced a 12 percent decrease because other blueberry-producing states like Oregon, Washington, Michigan and North Carolina also experienced production shortages.

Chile is a major source of blueberry imports to the U.S. Chilean blueberry imports were delayed

last January, and early winter prices ranged from \$22-\$28 per flat — 12 (1-pint) cups with lids — when compared to about \$12-\$17 per flat in 2017. However, Mexican blueberries later flooded the market and suppressed prices. Fortunately, Hurricane Michael did not affect the Georgia blueberry industry as much as it did the state's pecan industry.

Figure 5: U.S. blueberry production, per capita consumption and imports, 1980-2017



P=preliminary. *Domestic production minus exports. For 2017, based on production estimates from the North American Blueberry Council.

Source: USDA Economic Research Service.

Vegetables and Pulses

Esendugue Greg Fonsah

The Georgia vegetable industry experienced structural, institutional and policy changes over past years that would have a long-lasting impact in subsequent years. First, those in the industry expected to enjoy a bumper crop in 2018 and hoped to surpass the industry’s current combined \$1.14 billion in farm gate value. Second, Hurricane Irma caused much destruction in 2017. In 2018, Hurricane Michael made landfall on the Florida Panhandle and in southwest Georgia. Georgia’s vegetable industry is concentrated in the southwestern part of the state, and Michael’s strong winds and heavy rainfall caused enormous damage to the vegetable industry. Third, President Donald Trump replaced the North American Free

Trade Agreement (NAFTA), which he opposed during his presidential campaign, with the United States-Mexico-Canada Agreement (USMCA) on Sept. 30, 2018. President Ronald Reagan initiated NAFTA in the 1980s and President Bill Clinton implemented it in 1994.

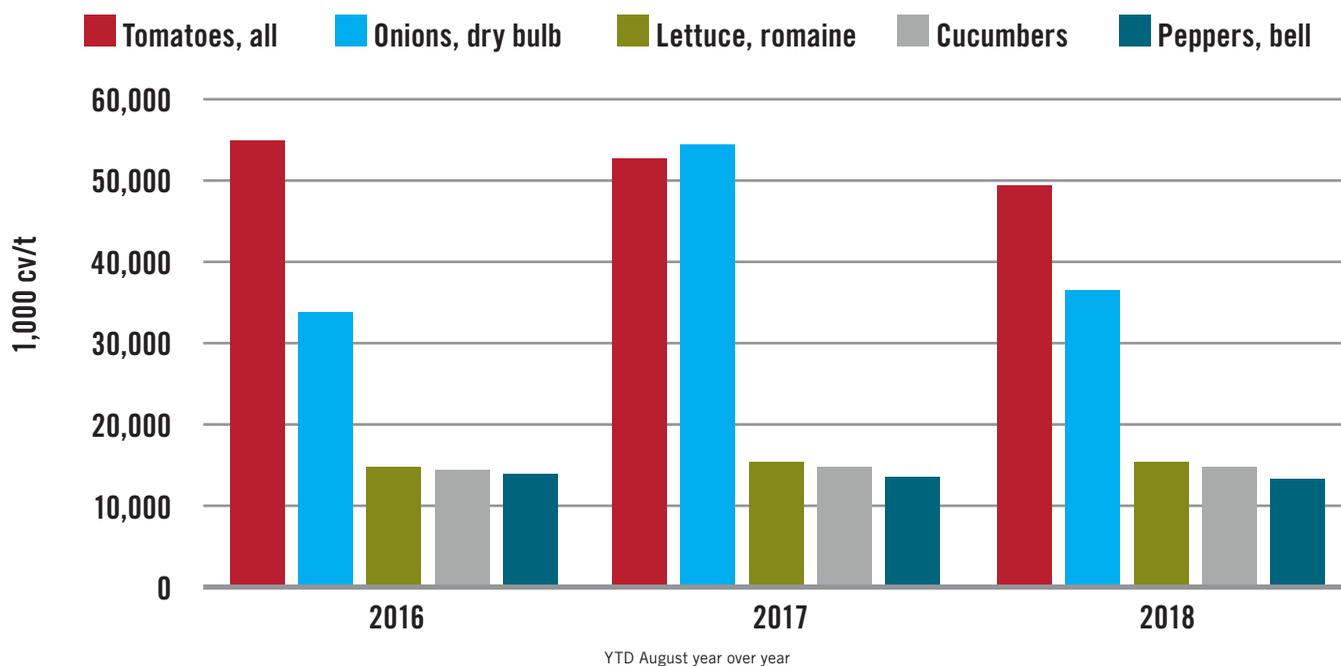
The USMCA is expected to last for 16 years and is renewable every six years. According to Robert Lighthizer, U.S. trade representative, and Chrystia Freeland, Canadian foreign affairs minister, the USMCA “will strengthen the middle class, and create good, well-paying jobs and new opportunities for the nearly half billion people who call North America home.”

The Georgia vegetable industry and specialty crop growers in the

Southeast are not happy with the USMCA because it includes many changes to the automobile and steel industries, but in agriculture, it only provides changes related to the dairy industry. It includes no provisions for the vegetable industry.

Southeastern specialty crop growers’ main complaint involves unfair Mexican trade practices. These growers believe the lower prices of Mexican produce, made possible by low production costs, makes it impossible for American farmers to compete. Because of these unfair trade practices, two senators — Sens. Bill Nelson and Marco Rubio, both from Florida — introduced a bill that would protect Southeastern specialty crop growers. According to VSCNews, “this bill comes amid long-standing

Figure 1: Fresh market vegetable shipments, 2016-2018



VEGETABLES AND PULSES, continued

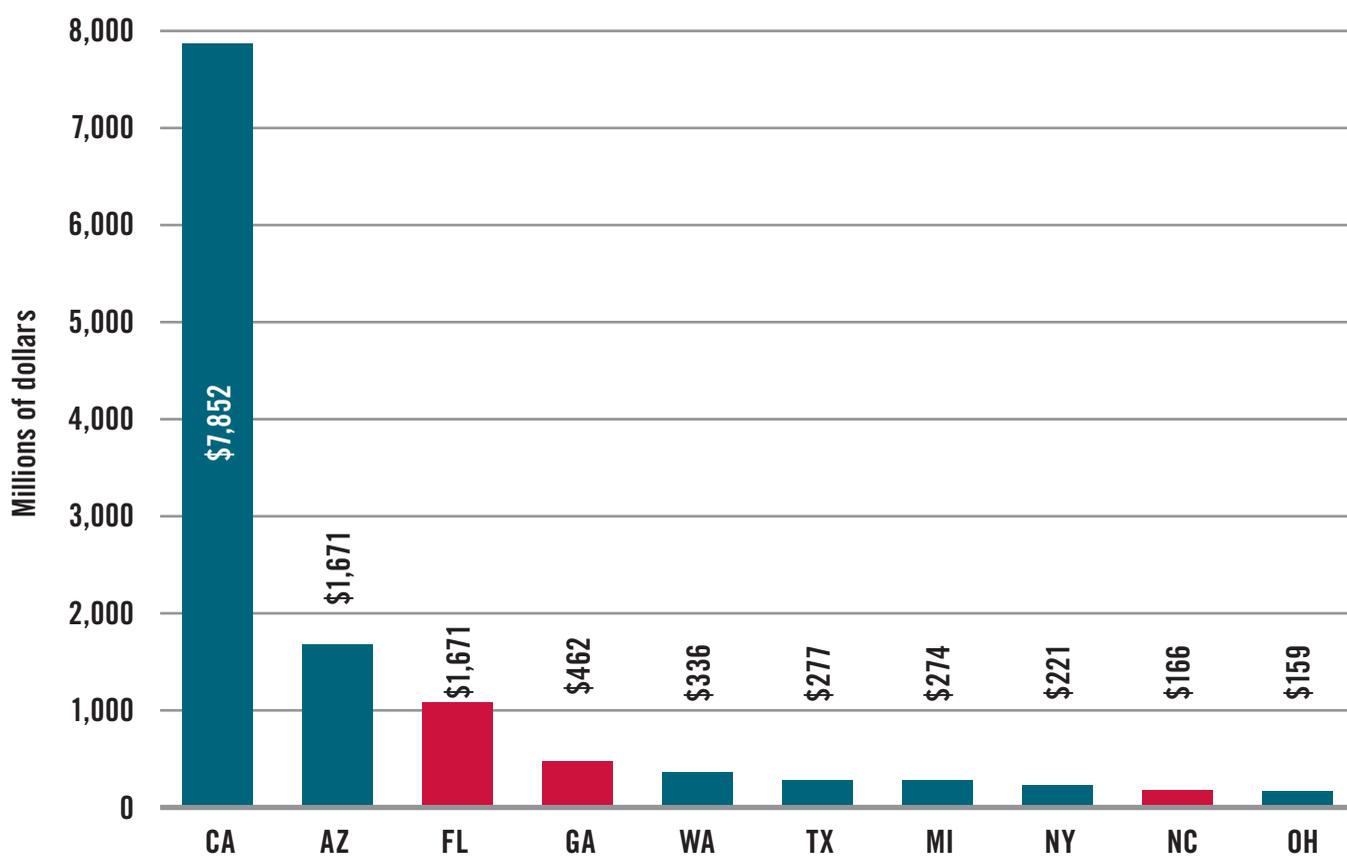
and increasing complaints from Florida farmers that Mexican growers are illegally flooding the U.S. market with subsidized produce during the winter season.”

Nationally, prior to Hurricane Michael, which made landfall on Oct. 10, 2018, there was an estimated slight decrease in fresh, field, round-tomato production in 2018 compared to 2017. On the other hand, romaine lettuce, cucumber and pepper production were estimated to be more or less the same (Figure 1).

However, Michael caused significant losses in crops across Georgia, especially in southwest Georgia, which houses most of the state’s vegetable crops. For instance, bell and specialty pepper, eggplant, tomato, sweet corn, squash, and cucumber crops sustained losses of approximately 70 to 90 percent. Other vegetable crops, like cabbage, greens, snap beans and broccoli, sustained damages between 20 and 50 percent. Overall, Georgia vegetable crop losses are estimated at \$480 million.

Georgia, Florida and North Carolina are among the top 10 vegetable-producing states in the country (Figure 2). With the devastation caused by Michael and the damages caused by Hurricane Florence in North Carolina on Sept. 14, 2018, chances are growers in these regions will not be able to bounce back without governmental assistance. As a result, total vegetable production is expected to decrease in 2019, thus driving prices higher.

Figure 2: Top 10 vegetable producing states in the U.S., 2017



Source: USDA National Agricultural Statistics Service



Corn, Wheat and Soybeans

Adam N. Rabinowitz

International trade issues dominated the news in terms of corn, soybeans, and wheat in 2018 as the U.S. renegotiated the North American Free Trade Agreement (NAFTA) and engaged with China in a trade dispute. The U.S. exports roughly 50 percent of wheat and soybean production and 20 percent of corn production annually, which makes trade an important part of these agricultural sectors. These international trade issues created a great deal of uncertainty in agriculture, on top of the usual questions surrounding the expiration of the current farm bill. As of late November 2018, trade issues with China continue to weigh heavily on the soybean market. Amidst all the uncertainty, however, is some positive news: Prices for wheat are up, corn has some upward potential and soybean prices could rebound if trade issues are resolved.

Corn

Planted acres of corn in Georgia continued an annual fluctuation in 2018, increasing 12.1 percent to 325,000 acres. This came after 2017's acreage, which was the lowest in more than 10 years. The 2018 acreage was also 10 percent below the 10-year average. The average yield is projected to be 169 bushels per acre, 4 percent lower than in 2017 but 2.4 percent higher than the 10-year average. If projected yields hold true, production will be 46.5 million bushels, 7.8 percent higher than in 2017.

Total U.S. corn production in 2018 is projected at 14.6 billion bushels, about the same as 2017. This

production level materialized with a 1.1 percent reduction in acreage and a projected 1.3 percent increase in yield. The projected yield of 178.9 bushels per acre would be a U.S. record, roughly 11 percent higher than the 10-year average. With total production down 3.4 percent from 2016 record levels, ending stocks continue to be on a slow decline. Projected ending stocks for the 2018-2019 marketing year are 1.7 billion bushels.

Despite trade issues affecting U.S. agriculture, overall exports of U.S. corn are projected to improve in 2018. Projected exports for the 2018-2019 marketing year are 2.5 billion bushels, an increase of 6.8 percent from 2016-2017. The renegotiated NAFTA, called the "United States-Mexico-Canada Agreement" (USMCA), should give some certainty to the corn market as Mexico is the No. 1 export destination for U.S. corn. It also is expected that corn production in South America will be down as acreage shifts to soybeans due to the trade issues between China and the U.S.

Total corn use in the U.S. for the marketing year ending Aug. 31, 2018, is estimated at 14.8 billion bushels. This total includes food, seed and industrial use of 7.1 billion bushels; feed and residual use of 5.3 billion bushels; and exports of 2.4 billion bushels. For the 2018-2019 marketing year, projections show increases in all uses. While this includes biofuel, it may not fully capture the expected increases in corn usage from the Environmental Protection Agency's (EPA) recent approval of E15 fuel on a season-round basis in the U.S.

The EPA's regulatory change and South American plantings create an opportunity for stronger domestic use and export demand than is currently expected.

Corn prices have remained low given the strong production of recent years. The 2016 and 2017 U.S. marketing year average (MYA) price has been steady at \$3.36 per bushel, the lowest MYA price since 2006. Prices in the first nine months of 2018 peaked at \$3.68 in May, the highest monthly price since January 2016. However, the market quickly dropped again to a low of \$3.36 in August. The U.S. Department of Agriculture (USDA) Market Facilitation Program (MFP) was created in response to retaliatory tariffs and has provided payments for selected commodities that suffered losses due to trade issues. For corn, the payment rate was 1 cent per bushel, the lowest payment rate of all commodities. This program will only last through 2018 as trade issues may be resolved before the 2019 harvest. The expected price range for U.S. corn for the 2018-2019 marketing year is from \$3.20 to \$4 per bushel. Georgia continues to benefit from a positive basis, and 2019 harvest prices may be in the range of \$4.50 to \$4.60 per bushel. A decrease in South American corn acreage will put upward pressure on U.S. prices, so reaching the upper end of that range is not out of the question at this time.

CORN, WHEAT AND SOYBEANS, continued

Soybeans

Planted soybean acres in Georgia declined for the third straight year to 140,000 acres, the lowest level since 1962. Yields also are projected to be off at 33 bushels per acre, slightly lower than the 10-year average. Total production of 4.3 million bushels is a 32 percent drop from 2017 and the lowest level since 2011. All told, the state of Georgia's soybean production doesn't reflect the state of soybean production at the national level.

In 2018, U.S. planted acres were the second highest on record at 89 million acres, just 1.1 percent below 2017's record acreage of 90.1 million acres. Yields also are forecast at a record 52.1 bushels per acre. If these yields hold, the U.S. soybean crop will be 4.6 billion bushels, surpassing the previous record set in 2017 by 4.3 percent. Suffice it to say there are many soybeans in the U.S. and ending stocks continue to be on the rise. By the end of the 2018-2019 marketing year, the ending stocks are projected at 955 million bushels, more than double the ending stock estimates from the end of 2017-2018 and more than three times the ending stocks as of August 2017.

Increased production is not the only contributing factor to the increase in ending stocks. Trade issues, primarily with China, have limited exports of soybeans, which are projected to fall to 1.9 billion bushels, down from 2.2 billion bushels in 2016-2017. This may even be a high estimate as greater global competition from increased soybean acreage in South America is expected. Crush has been fairly stable at a projected 2.1 billion bushels. With the decreased exports, total use of soybeans is expected to be down to 4.1 billion bushels.

Given the trade uncertainty and China's halting of almost all its U.S. soybean purchases, prices of U.S. soybeans dropped significantly in 2018. In 2017, the marketing year average price was \$9.33 per bushel and had been on the rise to \$9.85 per bushel in April. Once the retaliatory tariffs from China took effect in July 2018, the U.S. soybean price dropped to a low of \$8.59 per bushel in August. While prices are low for the 2018 crop, there has been some relief offered through government programs. The MFP payment rate for soybeans produced in 2018 was the highest rate of all commodities at \$1.65 per bushel. But the program is only available in 2018, so there is a great deal of uncertainty in terms of income from soybean production. The USDA has projected the 2018-2019 U.S. marketing year average price to be in the range of \$7.60 to \$9.60. On the low end, that would be the lowest price since 2006. The futures market seems to be a bit more optimistic, indicating prices for the 2019 harvest on the higher end of that range. With a slight negative basis, prices in Georgia during the 2019 harvest are forecast between \$8.75 and \$8.81.

Wheat

In Georgia, planted acres of wheat increased for the first time in three years to 200,000 acres, but harvested acres remained constant at 70,000 acres. Meanwhile, yields were up 15 percent to 54 bushels per acre, also significantly higher than the 10-year average yield. As a result of the increased yield, total production in 2018 was up 15 percent to 3.8 million bushels. This marked the first increase in Georgia wheat production since 2013.

For the 2018-2019 marketing year, soft red winter wheat production

is projected to increase by 2.3 percent to 286 million bushels, which represents 15 percent of all U.S. wheat. In 2018 total winter wheat acreage is estimated to decrease just over 100,000 acres to 32.5 million planted acres. With yields expected to continue to fall to 47.9 bushels per acre, production of all winter wheat is projected to decrease by 6.7 percent to 1.2 billion bushels.

Total U.S. wheat production is projected to increase during the 2018-2019 marketing year, up 8.3 percent from the previous year to 1.9 billion bushels. A 3 percent increase in planted acres and a 2.8 percent increase in yield drives this expectation. Even with this increase, ending stocks are expected to continue to decline, falling to 949 million bushels by the end of the 2018-2019 marketing year. Ending stocks of soft red winter wheat are projected at 170 million bushels, down 21 percent from a year prior due to a combined decrease in production along with an increase in domestic use and exports.

Total use of all wheat is projected to increase in the 2018-2019 marketing year to 2.2 billion bushels. The increase is expected across the board in food, feed and exports. This comes despite increases in global production, largely from production in China. Major U.S. wheat use breaks down into food use, 44.6 percent; exports, 47.1 percent; feed and residual use, 5 percent; and seed use, 3.2 percent. Meanwhile, total use of soft red winter wheat is projected to come to 330 million bushels in 2018-2019. This represents a 7.8 percent increase from 306 million bushels in the 2017-2018 marketing year. The increase is attributed to a 32 percent increase in exports. In fact, domestic use of soft red winter wheat is

projected to drop 2.8 percent during this period.

Prices for all wheat in the U.S. have started to move upward since the recent 2016 marketing year low of \$3.89 per bushel. The marketing year average price in 2017-2018 was \$4.72 per bushel. Prices have continued to increase during calendar year 2018, peaking at \$5.39 per bushel in May. MFP payments were also made at a rate of 14 cents per bushel for wheat produced during calendar year 2018. The futures market prices for the 2019 winter harvest range from \$5.07 to \$5.20, further indicating continued upward movement in the wheat market. The USDA projects a wider range for all wheat, from \$4.90 to \$5.30 per bushel. With a negative basis in Georgia, 2019 prices are forecast to range from \$4.82 to \$4.95 per bushel.

Sources

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Beef Cattle

Kent L. Wolfe

Unlike previous years, there were no major drought areas in Georgia in 2018. With sufficient rainfall in 2018 that led to good hay production and stable hay prices, most producers will see a reduction in feed costs that will help their bottom lines. Total cattle slaughter was up 2.7 percent year over year in 2018. Increased cattle slaughter, combined with an average increase of 2.3 pounds in cattle carcass weights, has contributed to a year-to-date increase in beef production of 2.7 percent year over year. Total 2018 beef production is projected to be 27 billion pounds, a new record for U.S. total beef production.

Supply outlook

The cattle cycle occurs every eight to 11 years on average as producers respond to price signals. The current cattle cycle, which started in 2015, has seen growth in the size of the U.S. cattle herd. The U.S. herd reached 103 million head in July 2018, up from 102 million in July 2017. The current cycle began in response to the end of the previous cattle cycle, when the herd was 98.4 million head. The reduction in supply triggered prices to rise and producers responded by building up their herds.

The current cattle cycle expansion has continued to date and is starting to slow as growth occurs at a moderate rate. It appears as though the current cycle is peaking and cattle numbers will start declining in 2020 and will continue to decline into 2025 in roughly the same 10-year cycle. However, the resulting moderate

herd growth rates in 2019 and 2020 combined with higher cattle slaughter weights will lead to modest beef production over the same time period. Excluding drought or other weather-related events, 2019 U.S. beef output is expected to be about 27.7 billion pounds, up 2 percent from 2018 figures.

In addition, heifer slaughter figures are up about 7 percent from 2017. Heifer slaughter in the third quarter of 2018 was 27.8 percent of total cattle slaughter, up from 27.2 percent in 2017. In addition, heifer retention in 2018 was down 2 percent from 2017, which further indicates the slowing expansion of the current cattle cycle. The increase in heifer slaughter numbers and the reduction in retention numbers should push heifer slaughter to near-average rates of just under 30 percent.

The 2019 beef production forecast is estimated at 27.8 billion pounds. There were fewer than expected cattle placed in feedlots, 6 percent lower than in fall 2017. The reduction in placements will impact production in the first part of 2019 as fewer than expected fed cattle will be marketed and available for slaughter in early 2019. As a result, there remains 5 percent more cattle on feed than there were a year ago, which supports expectations of strong marketing in the first half of 2019.

Demand outlook

In 2018, feeder cattle numbers were lower though the third quarter as compared to the same time in 2017 despite strong feedlot demand.

These lower numbers, combined with strong wholesale beef prices, have strengthened profits for feedlots and packers, which has kept feeder prices relatively strong through the year. Even though the number of cattle coming into production is slowing, the increase in slaughter weights will lead to production gains. Per capita consumption of beef has trended upward for the last couple of years, helping to absorb the additional beef production. Overall, per capita disappearance has increased to 59 pounds per capita, up from 57 pounds in 2017.

Wholesale choice beef cutout prices did not hit a slump in the third quarter of 2017, as was observed for the previous two years, and remain higher than levels earlier in the year. This is partially attributed to lower feedlot placements and feedlots that fed cattle longer, reducing available slaughter cattle numbers.

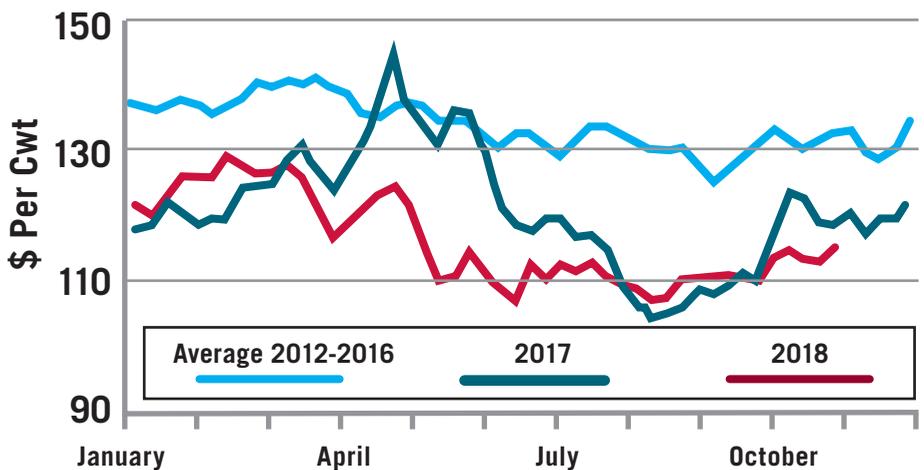
Consumer demand for beef has been increasing over the past three years and is expected to continue into 2019. However, demand for pork and poultry also has been increasing on a per capita basis, which will create competition between the three major proteins for consumer dollars. Production of all three protein products are predicted to increase into 2019, increasing the availability of competing products on the market. Increasing domestic consumption and export markets for beef will moderate the downward pressure on beef prices.

Table 1: Beef outlook summary

Beef production in millions of pounds					
	2017	2018	2019	2017/2018% change	2018/2019% change
I	6,303	6,465	6,590	2.5%	1.9%
II	6,407	6,325	6,975	4.7%	3.7%
III	6,736	6,315	7,170	0.6%	5.1%
IV	6,742	7,035	7,075	5.4%	2.5%
Annual	26,188	26,140	27,810	3.3%	2.3%
Beef trade in millions of pounds					
Imports	2,993	3,037	3,140	1.4%	3.3%
Exports	2,860	3,164	3,245	9.6%	2.5%
Price (Choice steers, 5-area direct, \$/cwt.)					
I	122.96	125.60	121.00	2.1%	-3.8%
II	132.76	116.72	123.00	-13.7%	5.1%
III	112.46	109.5	NA	-2.7%	NA
IV	117.88	111.0	NA	-6.2%	NA
Annual	121.52	116.00	117.50	-4.8%	1.3%

Figure 1: Slaughter steer prices

Five market weighted average, weekly



Source: USDA Agricultural Marketing Service (AMS), compiled by Livestock Marketing Information Center (LMIC)

Exports

Fourth-quarter export estimates indicate that U.S. beef exports increased in 2018, resulting in record third-quarter exports of 835 million pounds. Year-over-year exports have increased to markets outside major destinations and included key Asian markets, resulting in exports increasing 13 percent over 2017 levels. Increased production, weakening of the dollar against Asian currencies and strong overseas demand has driven the competitiveness of U.S. beef in 2018. The 2019 export of beef is estimated to be 3.265 billion pounds.

Hogs

Kent L. Wolfe

Pork outlook

The emergence of the African swine fever (ASF) in China may lead to significant shifts in the supply and demand structure for pork. African swine fever is a highly contagious and deadly viral disease affecting both domestic and feral, or wild, pigs in all age groups. ASF kills nearly all infected animals. It is spread by contact with infected animals' bodily fluids. It can be spread by ticks that feed on infected animals. People also spread ASF by moving the virus on vehicles or clothing.

There have been more than 360,000 cases of ASF in 2018 and the virus has been found in 19 countries. ASF has now jumped to China, home to half of the world's domestic pigs, and appears to be rapidly proliferating. The disease was first reported on Aug. 3, 2018, when it was noted that 47 out of 383 pigs on a small farm in Liaoning province in northeastern China had died. The virus has spread to five other provinces, resulting in the culling of nearly 40,000 hogs. Russia, Romania and the Ivory Coast all have significant cases of ASF. Depending on the spread of ASF, there may be increased demand overseas for U.S. pork as these producers cull their herds.

Supply outlook

Rounding the figures, with rising litter sizes, a 1 percent larger breeding herd increases pork production about 2.5 percent a year. That comes close to matching growth in total use. The industry can sustain growth of about 2.5 percent and maintain hog prices generally at or above total cost of

production. Positive returns to owner management, labor, etc., spur national herd growth. However, producers made profits since 2014, signaling herd expansion and investment in new and remodeled facilities. The investment in gestation and farrowing facilities has boosted capacity so that, as long as producers believe prices will cover variable costs, they will maintain full production.

Fourth-quarter 2018 commercial pork production is expected to total about 7 billion pounds. While this volume is 3.5 percent greater than a year earlier, it is slightly lower than the volume that was anticipated in October 2018. Persistently lower-than-expected weekly hog slaughter numbers in October 2018 and lower-than-expected average dressed weights largely drive the lower production forecast. Smaller production increases are likely to extend through the first quarter of 2019, for which the pork production forecast was also lowered by 45 million pounds to 6.85 billion pounds, but this is still more than 3 percent ahead of production a year earlier.

As the pork industry continues to expand the herd, production will hit record levels in 2018 at about 26.5 billion pounds. These record levels will cause disruptions in the packing industry as the additional production will pressure capacity during the fourth quarter of both 2018 and 2019 during peak hog slaughter weeks. Traditionally, peak slaughter occurs one or two weeks after Thanksgiving. Fourth-quarter hog slaughter could be up as much as 5 percent to 6 percent in the fourth quarter of 2018. Production in

2019 is expected to pass the 2018 record and reach 27.1 billion pounds.

Demand outlook

Consumption of U.S. pork is increasing, both domestically and overseas. Lower pork prices are one of the factors likely driving this increased consumption. This can be seen at both the wholesale and retail levels. The wholesale composite price of pork is down 10 percent in 2018 compared to 2017, while retail prices are 1 percent lower. Lower prices, combined with a strong economy and increase in household income, may partially explain the increase in pork consumption. In the first three quarters of 2018, the U.S. gross domestic product (GDP) and real disposable personal income have each expanded at rates that average more than 3 percent. This is significant since three-quarters of U.S. hog production is consumed domestically.

Domestic consumption has increased from 50.1 pounds per capita in 2017 to 51.5 pounds in 2018 and is expected to increase to 53.6 pounds in 2019. The biggest risk facing domestic consumption comes from competing protein products. To the extent that consumers are willing to substitute beef or poultry for pork, lower beef and poultry prices tend to exert downward pressure on pork prices. However, pork prices are expected to fall by 9 percent in 2019, which will make pork's price competitive with competing protein products.

While packer capacity is an issue to watch, as it could significantly impact prices, there are other factors that could

Table 1: Pork outlook summary

Pork production in millions of pounds					
	2017	2018	2019	2017/2018% change	2018/2019% change
I	6,410	6,645	6,850	3.5%	3.0%
II	6,137	6,325	6,605	3.0%	4.2%
III	6,240	6,480	7,170	3.7%	9.6%
IV	6,796	7,225	7,185	5.9%	-0.6%
Annual	25,583	26,675	27,810	4.1%	4.1%
Pork trade in millions of pounds					
Imports	1,116	1,099	1,075	-1.5%	-2.2%
Exports	5,632	5,989	6,115	6.0%	2.1%
Price (National base cost, 51-52% lean, live equivalent, \$/cwt.)					
I	49.73	49.12	40.00	-1.2%	-22.8%
II	51.70	47.91	43.00	-7.9%	-11.4%
III	55.59	43.90	45.00	-26.6%	2.4%
IV	44.89	41.00	NA	-9.5%	NA
Annual	50.48	45.48	42.00	-11.0%	-8.3%

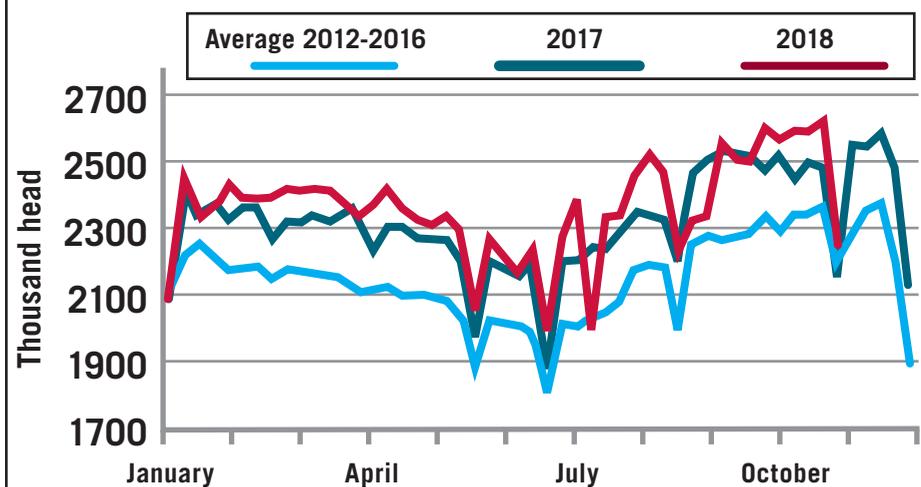
impact hog prices and demand this fall and beyond. The pork industry was facing headwinds earlier in 2018 with the implementation of U.S. tariffs on foreign metals. As a result, retaliatory measures have been implemented by the European Union (EU), Mexico, Canada and China in the form of tariffs on U.S. exports to their countries. This could have had a dire impact on the U.S. pork industry as Mexico purchased 32 percent of U.S. pork export volume in 2017. Canada and China each purchased 9 percent of U.S. pork exports last year. Those three countries purchased half of all U.S. pork exports in 2017. In retaliation, pork entering Mexico faced an increase in the duty rates from 0 percent to 10 percent in early June 2018 and from 10 percent to 20 percent in early July 2018. In China, the duty rate on U.S. pork and pork variety meat

increased from 12 percent to 37 percent on April 1, 2018, and to 62 percent on July 6, 2018. The lean hog futures market took this news as a huge hit on

market clearing prices. October 2018 lean hog futures prices, as an example, fell from about \$63 in June 2018 to under \$50 by early August 2018.

Figure 1: Hog slaughter

Federally inspected, weekly



Source: USDA Agricultural Marketing Service (AMS), compiled by Livestock Marketing Information Center (LMIC)



Poultry and Eggs

Kent L. Wolfe

Poultry outlook

Members of the poultry industry are observing a changing national meat complex as producers make more U.S. pork and beef available to the nation's consumers. Per capita consumption of beef is expected to increase by nearly 2 percent, while pork consumption is expected to increase nearly 4 percent. As the supplies of beef and pork increase, their prices have fallen, which makes them more competitive with poultry. The result has put downward pressure on poultry products, and chicken breast prices declined to near record low prices in the third quarter of 2018.

Supply outlook

Given the increased price competitiveness of beef and pork, broiler production in the third quarter of 2018 totaled 10.9 million pounds,

which was up 3.6 percent from the third quarter of 2017. This increase was a combination of an increased number of birds slaughtered (2.3 percent) and an increase in average live weights (1.2 percent). This third-quarter increase was not an isolated incident in that year-to-date production increased by 2.6 percent over the same time period in 2017. In addition to increased production, the cold-storage inventories are high, which suggests that production increased faster than demand. Cold-storage ending stocks in the third quarter of 2018 were up a significant 17 percent over the same time period the previous year. The increase in ending stocks can be mainly attributed to large inventories of other meats (Figure 1).

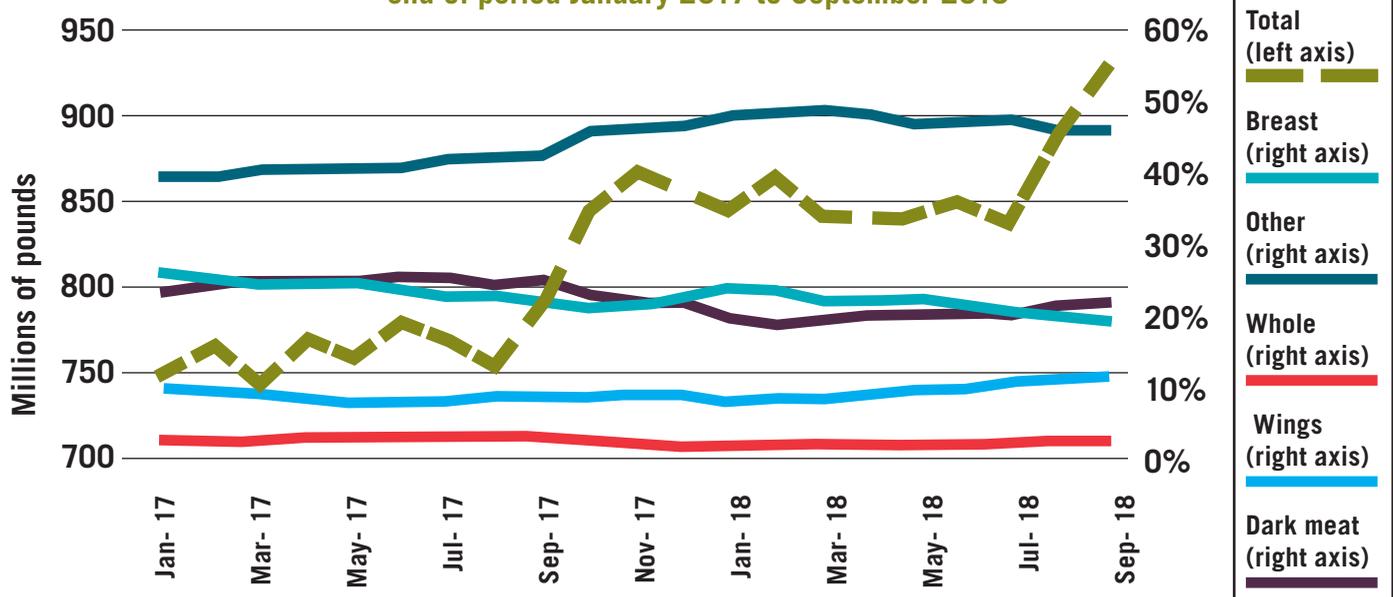
As can be seen in Figure 1, the ending stocks of broiler products in cold storage increased significantly during

the second half of the year. This decline in demand can be attributed to retailers shifting their products and marketing to holiday cuts of meats as well as the end of the summer grilling season.

In response to slower demand growth, weekly chick placements fell to levels below 2017. This downward trend in chick placement started in September 2018 and mimicked the trend seen in 2016 and 2017. However, the decline in placement in 2018 was 0.3 percent lower than in 2017.

Chick placement can be used as a barometer for future slaughter numbers. Figure 1 suggests that there will be little to no year-over-year growth in birds slaughtered in the fourth quarter 2018, but there may be small production gains over 2017 due to increased average weights.

Figure 1: Broiler cold storage and percent share of broiler parts, end of period January 2017 to September 2018



Source: U.S. Department of Agriculture Economic Research Service calculations using data from the USDA National Agricultural Statistics Service.

Figure 2: Poultry outlook summary

Poultry production in millions of pounds					
	2017	2018	2019	2017/2018% change	2018/2019% change
I	10,233	10,385	10,575	1.5%	1.8%
II	10,407	10,685	10,845	2.6%	1.5%
III	10,551	10,929	11,050	3.5%	1.1%
IV	10,472	10,650	10,900	1.7%	2.3%
Annual	41,663	42,649	43,370	2.3%	1.7%
Poultry trade in millions of pounds					
Exports	6,791	9,869	7,045	1.1%	2.5%
I	88.50	95.7	94	7.5%	-1.8%
II	104.70	115.1	104	9.0%	-10.7%
III	94.90	93.7	95	-1.3%	1.4%
IV	86.10	85.0	NA	-1.3%	
Annual	93.50	97.1	95.5	3.7%	-1.7%

Demand outlook

Broiler per capita consumption is expected to increase in 2019, but at a slower rate than the increase in both pork and beef.

At the beginning of the fourth quarter of 2018, wholesale whole-broiler prices (national composite) trended upward slightly, reaching nearly 85 cents per pound. Boneless-skinless breast prices and leg quarters fell to 87 cents and 29 cents per pound, respectively, the first week of November 2018. However, the prices for leg quarters are still well above 2015 levels, when avian influenza in other poultry commodities led to bans on U.S. poultry overseas, resulting in reduced exports. Interestingly, boneless-skinless breast prices remain at multidecade lows. Again, the increase in production combined with slower domestic demand growth may result in downward price pressure.

Egg supply outlook

Table egg production increased throughout 2018. The combined growth of table egg layers — 3 percent — and number of eggs per layer — 1 percent — continued into the fourth quarter 2018. The average number of eggs per layer improved even though the number is lower than in 2017, which suggests that producers are rebuilding their laying stocks. In addition, hatching eggs increased significantly in the second half of 2018 and this growth is expected to continue into 2019.

Egg demand outlook

Exports to the top export markets did not maintain 2017 levels. In the third quarter of 2018, egg exports fell 10 percent over the same time period in 2017, driven by a nearly 0.25 percent decline in egg products at the same time egg exports were up 2 percent. The decrease in egg exports to the top

10 overseas markets were offset by increased exports to Canada, the U.K. and Hong Kong. Egg imports declined 39 percent during the third quarter of 2018. Canada and Thailand were the major suppliers. Imports for the Netherlands fell by 96 percent year over year.

The egg prices in 2018 were estimated to be \$0.401 cents per dozen higher than they were in 2017. Prices in the first quarter of 2018 reached nearly \$1.79 per dozen and then fell to \$1.41 per dozen for the yearly average. The prices are forecast to be in the \$1.18 cents per dozen range in the first quarter of 2019, eventually increasing to an average of nearly \$1.25 cents per dozen for 2019.



2019 Dairy Outlook

Dairy farmers faced another year of very lackluster milk prices in 2018, as the modest price recovery of 2017 gave way to some of the lowest farm-level milk prices in nearly a decade. Milk production, which was quick to increase in response to higher prices in 2017, was slower to decline in response to sluggish domestic sales of milk and dairy products and reduced exports during the first half of 2018. The strong export markets that gave the U.S. dairy industry a much-needed boost in 2017 weakened somewhat during the second half of 2018. China and Mexico, both major importers of U.S. dairy products historically, placed retaliatory tariffs on imports of U.S. products. During 2018, China purchased about 26 percent less dry whey and 40 percent less cheese from the U.S. than during the previous year, while Mexico purchased roughly 20 percent less cheese. Some of these export losses were, however, offset by increased purchases from countries in Southeast Asia and the Middle East, possibly spurred by lower world prices for dairy products. Overall, about 16 percent of U.S. milk production was exported in the form of manufactured dairy products during 2018. Worldwide demand for skim milk powder and dry whey, both important ingredients in many manufactured food products, remained strong, drawing down stocks in the U.S. and European Union (EU) intervention stocks. Domestic commercial use in the U.S. grew at a modest rate of about 1

percent during 2018. U.S. cheese and butter prices weakened somewhat toward the end of 2018, reflecting an increase in domestic stocks of dairy products and placing additional downward pressure on farm-level milk prices.

The U.S. All Milk price, a weighted average of the price of milk across all uses, rose by 8 percent, from \$16.30 per 100 pounds (hundredweight) in 2016 to \$17.65 in 2017, but fell back to about \$16.20 in 2018. Despite 2018's lower milk prices, dairy cow numbers and milk production levels did not begin to respond in any significant way until midyear. The size of the U.S. dairy herd in 2018 had fallen back to 2017 levels by July, but still ended the year with 9.365 million head, compared to 9.39 million in 2017, based on a major downward revision by the U.S. Department of Agriculture (USDA). Per cow productivity increased by roughly 1 percent, from 22,941 pounds per cow per year in 2017 to 23,210 pounds in 2018, due in part to the culling of less productive cows. This combination of decreasing cow numbers and increasing per cow productivity resulted in a 1.1 percent increase in milk production, from 215.5 billion pounds in 2017 to 217.9 billion pounds in 2018, which is a modest increase, but an increase nonetheless, in the face of several consecutive years of low farm milk prices. As U.S. dairy farms continue to grow fewer in number and larger in size, their ability to withstand price downturns with smaller and slower reductions in milk production seems

to increase such that production responds to price increases much more quickly than it does to price decreases.

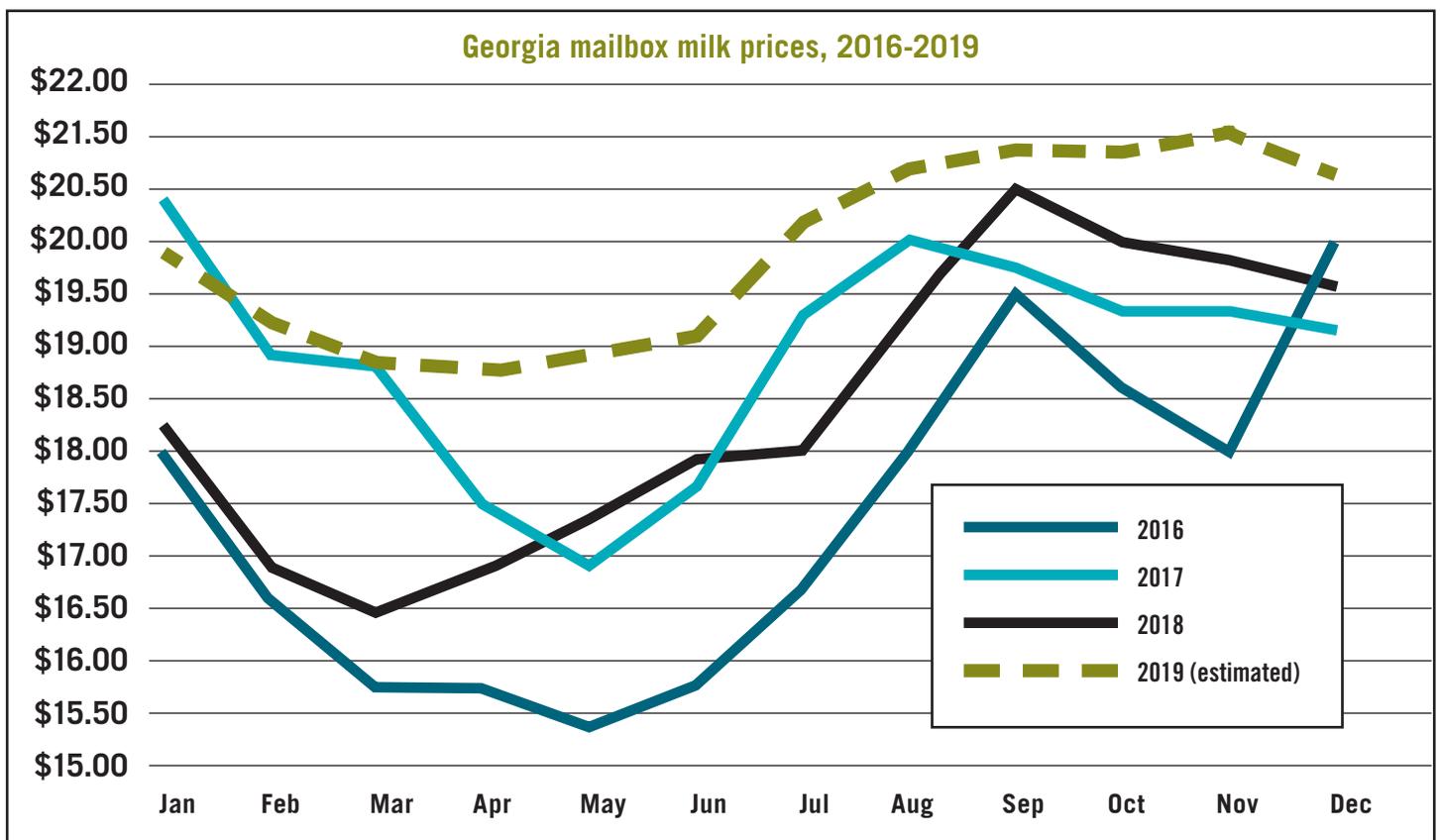
The milk production trend that prevailed throughout the second half of 2018 is likely to continue well into 2019. Dairy cow numbers are projected to remain at or near the 9.365 to 9.375 million head level throughout much of 2019. Cow productivity is likely to continue at its current growth rate of about 1.3 to 1.5 percent per year. This will translate to growth of about 1.4 percent in milk production in 2019, which is below the industry's historical long-term trend. The USDA forecasts the 2019 U.S. All Milk price will range between \$16.70 to \$17.60, reflecting the uncertainty inherent in forecasting long-range prices that are subject to fluctuations in both supply and demand conditions that are relatively inelastic. The midpoint of this forecast price range, \$17.15 per hundred pounds, represents the potential for a modest improvement over 2018 price levels. This expectation is predicated on the continuation of a strong U.S. economy combined with strong worldwide demand for dairy products and limited prospects for increased production in other major exporting countries. Major dairy product exporters include the U.S., EU, New Zealand, Australia and Argentina. EU milk production is expected to increase only slightly, if at all, during 2019 based on currently prevailing conditions. Australia's dairy industry was recently impacted

by drought conditions that have both hampered per cow productivity and raised feed costs significantly. New Zealand's milk production appears to be strong, although it is still quite early in the country's production season at the time of this writing. Collectively, milk production across all of the major exporting countries is expected to grow at around 1 percent or less during 2019. Limited production growth across the major exporting countries coupled with strong worldwide demand suggests a better year for farm milk prices in 2019 even though significant price improvements may not materialize

until late in the year.

Georgia ranks second in terms of milk production in the Southeast, behind Florida, and 23rd in the nation. It is home to approximately 84,000 dairy cows that collectively produce about 1.8 billion pounds of milk each year. Farm-level milk prices in Georgia fluctuate in step with U.S. prices through a series of milk pricing formulas administered by the USDA. These formulas are tied to U.S. prices for various manufactured dairy products, which are, in turn, heavily influenced by world dairy prices. Consequently, the milk price received by the

state's dairy farmers is increasingly dependent on world supply and demand conditions. Georgia dairy farmers have historically received a farm-level milk price that is, on average, about \$3 per cwt. higher than the U.S. All Milk price. This price difference reflects the additional value typically placed on milk produced in the milk-deficit regions of the Deep South. The implication is that, based on the USDA's current 2019 forecasts, Georgia dairy farmers could realistically expect to see average farm-level milk prices in the range of \$19.70 to \$20.60 in 2019.



Green Industry

Ben Campbell

The Georgia green industry — comprised of production, wholesale, logistics, retail and a host of other operation types — varies in both size and location throughout the state. The largest concentration of firms are around the Atlanta area, which is to be expected given the population base in and around Atlanta, as well as this area's higher median incomes as compared to the state as a whole. Increased population and income provide advantages, but the increased number of firms contributes to intense competition within the area. Firms are not as concentrated in south Georgia, but demand in these areas is not as strong as it is around Atlanta.

The green industry had a farm gate value of more than \$843 million in 2016, up 7 percent from 2015, according to University of Georgia Center for Agribusiness and Economic Development (CAED). The greenhouse sector continued to have the largest farm gate value followed by the container nursery, turfgrass and field nursery sectors, respectively. Farm gate values have been increasing over the last couple of years and should continue to increase into 2019.

The growth of Georgia's green industry depends on a number of factors — economic growth, weather, external events — that play a critical role in industry growth. Forecasting for 2019 is somewhat difficult given the mixed signals in the marketplace. With respect to economic growth, state economic growth and housing starts are two

areas that can provide an indication of how the industry will trend in 2019. Housing starts throughout the Southeast increased by 7 percent from spring 2017 through the first half of 2018, according to the U.S. Census Bureau. Further, there is a projected 3.1 percent increase in U.S. gross domestic product (GDP), with Georgia GDP expected to increase by around 3.3 percent in 2019, according to Kiplinger and Trading Economics. The Federal Reserve anticipates at least three more years of economic growth. However, the Federal Reserve has been increasing interest rates and foresees more rate hikes in 2019, which could dampen housing starts and homebuying. Further, the volatility in the U.S. stock market and shift in legislative power in Washington could cause some retraction in economic growth. Real median incomes in Georgia are expected to grow, as they have trended slightly upward over the last couple of years, another good sign for the state's green industry.

Weather is also an important factor in green industry product demand. National Weather Service projections indicate a warmer winter, then normal temperatures and precipitation for most of Georgia in spring 2019. However, weather at inopportune times (i.e., on weekends) could be detrimental to product demand. There is no way to forecast when rain will fall or when temperatures will be warm enough for the spring season to start, but early 2019 projections indicate favorable temperatures and precipitation that

could drive demand.

In essence, there are competing forces, a growing economy led by increased housing starts, and normal weather during prime retail time leading to optimistic projections for the industry. However, potential negative factors are increasing interest rates, legislative power shifts and stock market volatility. In 2019, anticipated small growth industrywide will occur due to firms that can manage or cut costs or find new marketing opportunities to experience higher growth, based on farm gate values from the CAED in conjunction with other data. Assuming housing starts remain strong, the expectation is that growth will be slightly higher than that of Georgia's economy as a whole.

Similar to 2019, all firms within the industry will not see growth, as continued competition from within Georgia and from outside exports will make less efficient firms less profitable or drive them out of business altogether. Firms that can facilitate demand by pricing competitively; taking advantage of marketing methods that directly appeal to likely consumers; or identifying a niche market, either a unique product or consumer group, will experience the greatest growth. Competitive pricing should be a primary goal in 2019. As more firms enter the market and current firms expand production, pressure for firms to price competitively will increase. Firms that are able to reduce costs can raise their margins and increase their profitability.

One of the leading factors that will contribute to costs is labor, especially given the potential changes to immigration policy put forth by the government. Firms that are proactive and able to effectively manage labor costs will see improved profitability and increased growth. With respect to marketing, firms that understand their customer base and appropriately market and advertise will increase the demand for their products. As was the case over the last couple of years, connecting with new and old consumers is of vital importance, especially through the online marketplace. Millennials are connected through their hand-held devices and firms must reach them through online methods, while baby boomers are more likely to respond to traditional types of advertising. Efficiency with marketing and advertising dollars is essential. Companies that find creative ways to market to specific target groups to maximize marketing dollars will drive sales in the short and long terms. Finally, firms that can think outside the box and identify new or unique products or that can find a consumer group that values something the firm sells will position themselves for increased profitability and growth.



Honey bees

Jennifer Berry

Significant national changes in the beekeeping industry in 2018 included the closure of Brushy Mountain Bee Farm and the acquisition of Grey Mountain Partners and Kelley Beekeeping by Mann Lake. However, there were no positive changes in honey production in Georgia, which was again disappointing. In fact, 2018 honey yields were worse than 2017 and, in some cases, were the worst in 20 years. Overall nectar flows were below average with estimates that ranged from 20 to 90 percent lower than normal yields.

Gallberry, which is considered one of Georgia's most abundant honey crops, is a good honey for packing because it's light in color, doesn't crystallize as readily and has a pleasant flavor. Gallberry, for the second year in a row, tanked as far as a reliable honey source. Barrel prices for 2018 ranged from \$2.15 to \$2.25 per pound, slightly lower than 2017's barrel prices. Wildflower nectar flows were below average in Georgia and other states as well. The wrong weather at the wrong time led to lower yields for both wildflower and gallberry honey. Cool and rainy weather during bloom kept the bees inside hives as opposed to foraging for nectar. Honey prices for spring wildflower honey remained about the same as gallberry honey.

Cotton honey yields from the middle to southern regions of Georgia were average, but much of the honey harvested was considered too thin. Moisture content in honey should be in the 17 to 18 percent range so the honey won't spoil, ferment or

crystallize. In 2018, cotton honey had a higher moisture content and had to be dried out before it could be bottled. Because of this, cotton honey is considered a baker's grade and not sold as table honey. The price for cotton honey averaged around \$1.85 per pound. Specialty honey was also below average. Blackberry, a favorite springtime honey, was lackluster due to rain, and retail price ranged around \$7.50 per pound.

Yields of tupelo honey were better than average for 2018, which was a welcome surprise. Fortunately, the rain didn't impact the nectar flow as it has for the past four years. Prices for tupelo honey dropped several dollars per pound due to increased amounts available. Prices ranged around \$6 per pound as opposed to 2017's \$8 per pound.

The sourwood crop was the biggest disappointment for beekeepers, even though early predictions pointed to an above-average flow. Unfortunately, in most areas, the sourwood flow was nonexistent. The blooms were there, but when heavy rains set in, the honey didn't materialize. A strong colony can usually bring in 50 to 60 pounds on average, but in 2018, most colonies brought in zero amounts. Prices for sourwood in a barrel rose to \$10 per pound wholesale and \$15 per pound retail. Hopefully, next year will bring better nectar flows for Georgia, but this is almost impossible to predict.

Reports of colony failure are normal (20 to 30 percent) for commercial beekeepers, but above

average for the backyard beekeeper, and some are experiencing an 80 percent loss. The problem for those is twofold. First is the lack of honey in most colonies across the state due to rainy weather during the major nectar flows. Below-average amounts of honey were stored, so colonies are extremely light and if beekeepers haven't fed or plan to feed, the colonies will surely starve.

The exotic, ectoparasitic mite, *Varroa destructor*, is the second reason colony loss is higher than normal. This mite continues to be a major problem, unless beekeepers have maintained populations below the economic threshold. Many backyard beekeepers don't have the knowledge or 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. These mites feed on the fatty bodies of the honeybees (adults and brood), thereby decreasing their ability to ward off pathogens such as deformed wing virus (DWV). Prior to the introduction of this mite into the U.S., DWV was a benign pathogen that did little to no damage to the individual or the colony. However, once mites invade a colony and begin to feed on the bees, overt symptoms of DWV appear and slowly kill the colony. If beekeepers don't control mite populations, colonies eventually perish. Even with several nationally approved miticides for use in hives, mites are still the No. 1 killer of colonies throughout the U.S.



Higher-than-normal small hive beetle (SHB) populations were reported in all regions of Georgia and across the Southeast, potentially due to moist soil conditions because of overabundant rain. In late summer and early fall, most beekeepers fed, administered mite treatments and applied other techniques to reduce pest population levels to help colonies survive the winter months.

There still seems to be an interest in beekeeping and the numbers of backyard and commercial beekeepers in the state keep growing. In turn, demand increases for beekeeping clubs and associations, and there are now more than 45 such organizations in Georgia. This increase also results in a higher demand for packages and nucleus colonies, which saw steady increases in sales over the last several years. Indications are the 2019 season will follow the same trend. The 2019 prices for a 3-pound package of bees, with a queen, average around \$105 to \$120 per package. Nucleus colonies, complete with bees, brood, honey, pollen and a queen, range from \$165 to \$230 depending on location and when the bees will be ready for sale.

The demand for pollination services still looks good for the upcoming 2019 season. Truckloads of bees from Georgia and the South will head west by mid-January. Contract fees for pollinating almonds in 2019 are ranging around \$190/colony. Beekeepers across the state and nation diligently try to keep colonies healthy and strong to supply the 1.8 million colonies necessary for the almond-bearing trees and other pollinator-dependent crops.

Timber

Alec Roach and Bob Izlar

The U.S. economic outlook should continue its strong forward momentum into the third quarter of 2018. American wood markets face less certainty due to increasing international friction, but more certainty in terms of increasing capacity and lumber prices. Over the past year, the domestic economy surged forward compared to international economies. Moving into the future, continued fiscal stimuli from tax cuts and increased government spending should cause the U.S. economy to expand. Central bank monetary policy and an increased focus on fiscal stimulus policy in China should stabilize international markets. Domestically, housing starts are expected to rise 11.2 percent over the next year. This market trend has huge implications for lumber demand and stumpage prices for landowners with working forests.

Economic growth looks optimistic, despite the trade war with China. Gross domestic product (GDP) rose over the second quarter of 2018. This level of growth probably won't be sustained into the later stages of 2018, but may find an equilibrium around 2.6 percent to close out the year. The economy is expected to continue the longest expansion ever witnessed. Strong economic indicators, including increases in wage rates and a workforce approaching full employment, drove the Federal Reserve Bank decision to increase interest rates. Bolstered by the strong job market, consumer confidence fueled consumer spending increases of 3.5 percent over the quarter.

Consumer spending is expected to decrease in the second half of the year but remain above 2.7 percent. Wage increases ride on the increased demand for workers and inflation levels of 2.5 percent. Current inflation rates are above the preferred threshold of 2 percent. The U.S. added 600,000 jobs in second quarter 2018, and unemployment levels were at 3.9 percent and remain constant over several quarters. Corporate investment remained strong in the wake of tax reform laws passed at the end of 2017. Housing starts are expected to fluctuate around their current rates for the rest of 2018, but increases are forecast for 2019. Despite a shortage of existing homes, increases in housing starts are limited by the overall labor shortages in the construction and transportation sectors and ever-changing input costs. The housing development sector expects to build on positive trends from second quarter 2018.

Commodity prices

Commodity prices were extremely high throughout 2018 but are expected to moderate in 2019.

Random Lengths' softwood framing lumber price closed at \$547 per thousand board feet (mbf) for second quarter 2018, an increase of nearly 12 percent through the quarter. Second quarter 2018 saw a more than 40 percent increase from second quarter 2017, and the lumber composite price averaged \$564 per mbf through this quarter. The peak in May (\$582 per mbf) was driven by warmer weather finally opening

up demand in the Midwest and Northeast. Mills scrambled to fill these orders, but the prices began to fall in June as the market was flooded by too much supply.

Pulp prices (northern bleached softwood kraft pulp) closed at \$1,330 per metric ton, which is a 19 percent increase from second quarter 2017. The price increases continued throughout the quarter as major producers saw flatlining prices in China. Other markets were in chaos throughout the quarter, including the newsprint market, in which producers have gone in opposite directions in terms of pricing, mostly based on the new tariffs on imported Canadian newsprint. Additionally, China began a policy of 100 percent inspections of old corrugated cardboard (OCC) imports, which comes as the supply of OCC continues to tighten due to e-commerce. This e-commerce puts more cardboard into the hands of households, which results in a lower recycling rate (smaller supply of OCC) and a lower-quality OCC to export to the Chinese markets.

As of the third quarter 2018, TimberMart-South reported an average Southern pine sawtimber price of \$23.81 per ton. This represents a year-over-year increase of \$0.15 per ton in stumpage prices for pine sawtimber across the South. The average pine pulpwood¹ stumpage price was reported at \$8.78 per ton, down \$0.54 per ton year over year. Pine sawtimber prices have remained below \$24 per ton for seven consecutive quarters now, something that has not occurred since the

early 1990s. This sawtimber pricing depression compared to the record lumber prices observed over the year highlight the need for more market participants along the supply chain. Stumpage prices vary by submarket. For up-to-date prices, check with your local forestry consultants.

Demand outlook

Throughout the South, pine grade² demand decreased marginally by 0.8 percent in the second quarter 2018. According to our model, Georgia and Alabama had the greatest effect on the quarterly decrease. Pine grade decreased marginally by 0.14 percent over second quarter 2018. The index had a 0.65 net increase over the past year, making second quarter 2018 appear to be an outlier. Pine grade demand across the South experienced a marginal decrease of 0.8 percent. Most states did not experience any notable change in demand except for Tennessee, Georgia and Alabama. Tennessee experienced the largest decrease over second quarter 2018, falling approximately 14.1 percent. Alabama also decreased 4.5 percent over that quarter (Figure 1).

With the addition of several high-capacity sawmills coming online, pine grade demand is expected to increase nearly 20 percent into 2019. Recent investment activity in Southern sawmill projects includes Interfor's plans to increase several Southern sawmills' capacity by an additional 275 millions of board feet (mmbf) annually. Georgia Pacific, Rex Lumber, CanFor and Sunbelt Forest Ventures all revealed plans to build new mills that will require more than 640 mmbf when complete. With near record-high lumber prices, lumber-producing firms are investing heavily in mill upgrades and production to capture these prices. With increased competition and capacity, prices and lumber demand should find a fair market equilibrium. These supply chain dynamics, coupled with stable economic conditions, boosted pine grade demand into the third quarter of 2018.

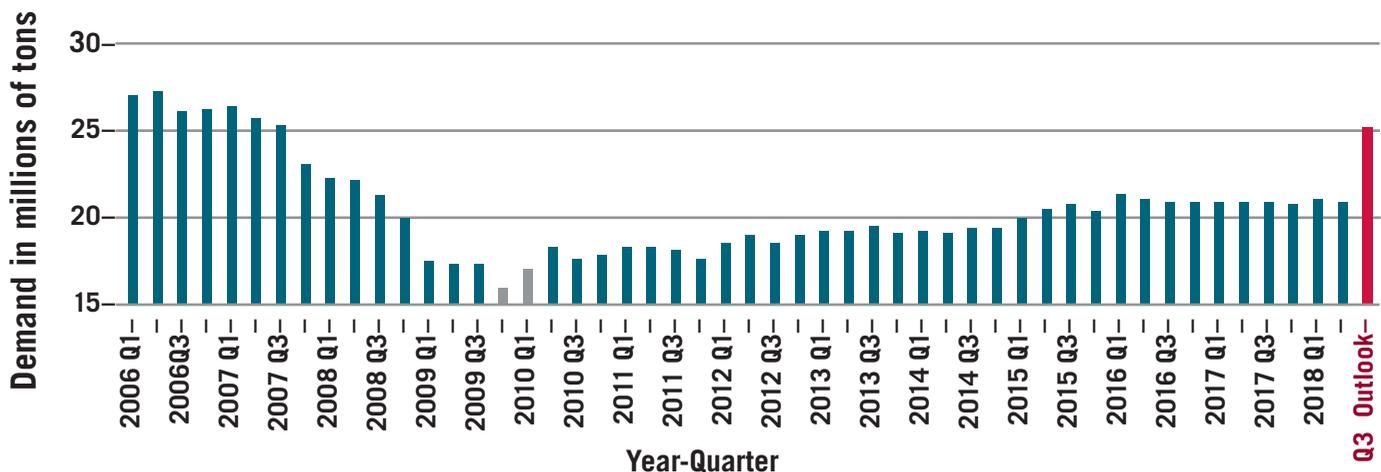
Landowners continue to retain high amounts of timber with the hope that increased mill expansion will increase price trends to pre-2008 levels. Due to an abnormally wet summer and autumn, timber

harvesting in most Southern states has been extremely difficult. As yet unknown effects of Hurricane Michael could make these conditions even worse from a harvesting and supply perspective. Landowner behavior taken to delay harvesting in hopes of price hikes, in conjunction with poor harvesting conditions, has created a substantial standing timber supply. This wall of wood will continue to control prices even as demand increases.

Hardwood grade demand (timbers used in pallet and lumber production included) increased by 0.04 percent over the second quarter 2018 and decreased 0.28 percent year over year. The largest increase was observed in Alabama, where demand increased by approximately 1 percent. Georgia accounted for the largest decrease over the quarter, nearly 1.1 percent. Even in the face of rising trade tensions between China and the U.S., hardwood grade demand is expected to rise 3.7 percent over 2017.

Halfway through 2018, pine pulpwood woods-direct chips (delivered wood chips from in-wood chipping operations) remained

Figure 1: Pine grade timber demand demand in Southern U.S.



Source: The Harley Langdale, Jr. Center for Forest Business: Wood Demand Research Program

TIMBER, continued

mostly stagnant. Models from the University of Georgia Warnell School of Forestry and Natural Resources Harley Langdale Jr. Center for Forest Business Wood Demand Research Program forecast an upward spike in demand over third quarter 2018, and estimates suggest an 11.6 percent increase in demand quarter over quarter. Current data suggests Georgia and Alabama hold the largest shares in the market. Both states may experience the largest increases in demand over third quarter 2018, with increases forecast at 13 percent and 18 percent for Georgia and Alabama, respectively. Over second quarter 2018, the South experienced a 0.37 percent increase in pulpwood demand from oriented strand board (OSB) and panel mills. Pine pulpwood demand from chip and pulp/paper mills, which represents the largest volume in this category, did not experience a significant change over second quarter 2018. The demand from both sectors is expected to significantly rise into third quarter 2018 with a 25 percent increase in OSB/panel mills and a 9.8

percent increase in pulp/paper mills (Figure 2).

Moving into the end of 2018, pine pulpwood consumption across the South will primarily be driven by increased demand from pulp and paper mills and bioenergy producers, which could now be skewed by Hurricane Michael. Demand for newsprint and traditional paper-based products continues to fall due to the rise of online shopping and technology-based media. This decreased demand is offset by a sharp increase in paperboard and other paper-based packaging products. With a forecast increase in population and economic growth in developing economies like India, demand for pulp-based consumer products like napkins and other sanitary products is expected to rise into the future. Advances in engineered wood-based composites such as glued, laminated timber, or glulam, and cross-laminated timber (CLT) have proven to produce structurally safe commercial and residential buildings. The U.S. now follows the international

community in terms of the production of wood-based skyscrapers. This new market and the continued rise in traditional lumber prices should drive demand upward for these wood composites into the future. Existing and planned bioenergy facilities, including pellet mills, in the South may have a noticeable impact on prices and demand for pulpwood timber in wood baskets throughout the region. Led by the U.K., global demand for U.S. pellets should increase to roughly 26 million tons by the end of the decade, with a significant majority of the current and announced production capacity to occur in the South^{3,4}. Forecast demand for bioenergy remains strong both domestically and in international markets. This market situation, coupled with a rising trend in crude oil and transportation prices, predicts a favorable investment climate for bioenergy moving into 2019.

Figure 2: Pine pulpwood and in-woods chip demand in Southern U.S.



Source: The Harley Langdale Jr. Center for Forest Business: Wood Demand Research Program

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Footnotes

- ¹ 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.
- ² Grade timber includes large- and medium-sized logs that are primarily used in lumber production. Some portion of medium-sized logs, known as “chip-n-saw,” are chipped and further used in pulp production.
- ³ “Effect of policies on pellet production and forests in the U.S. South.” U.S. Department of Agriculture, Forest Service. General Technical Report SRS-202. December 2014.
([www.forisk.com/UserFiles/File/WBUS_Free_201209\(1\).pdf](http://www.forisk.com/UserFiles/File/WBUS_Free_201209(1).pdf))
- ⁴ Wood Bioenergy US. Volume 7, Issue 4. Forisk Consulting.

HURRICANE MICHAEL'S IMPACT

ON GEORGIA'S AGRICULTURAL ECONOMY

THE BIG PICTURE: FARM GATE VALUE

Hurricane Michael was catastrophic for commodities integral to Georgia's economy. To contextualize the impact of the storm's damage, it is helpful to consider the direct and ancillary losses within the scope of the state's agricultural economy. The numbers below represent the most recent farm gate values for the hardest-hit commodities. To read the full 2016 Georgia Farm Gate Value Report, visit <https://t.uga.edu/4w5>.

 **TIMBER**
\$681 million

 **COTTON**
\$968 million

 **VEGETABLES**
\$996 million

 **PECANS**
\$356 million

 **POULTRY**
\$4.4 billion

 **PEANUTS**
\$624 million

 **GREEN INDUSTRY**
\$832 million

 **SOYBEANS**
\$112 million

NOTE: All agricultural support sector loss estimates provided by Kent Wolfe and Sharon Kane of the UGA Center for Agribusiness and Economic Development.

Hurricane Michael moved through southwest Georgia Oct. 10–11, 2018, causing more than \$2.5 billion in losses to the state's agriculture industry, according to estimates from University of Georgia Cooperative Extension agents and agricultural economists.

Direct losses are a result of immediate damage to commodities grown by Georgia farmers and agricultural producers. These losses include commodity damage to crops (cotton, soybeans, corn silage), trees (pecans, timber), livestock (chickens), and structures (greenhouses, chicken houses, dairy buildings). Impacts on the agricultural support sector refer to Georgia agribusiness losses resulting from reduced output from the state's farmers and producers, restricting the value-added services necessary to produce finished goods. These estimates are subject to change.

Cotton

\$550–600 million

Direct losses

Estimated by Jared R. Whitaker, Crop and Soil Sciences; Yangxuan Liu and Jeffrey H. Dorfman, Agricultural and Applied Economics

\$74 million

Agriculture sector losses

Dairy

\$5.5 million

Direct losses

Estimated by Sharon Kane, Center for Agribusiness and Economic Development; John Bernard, Animal and Dairy Science; and Mark McCann, Assistant Dean for Extension

\$6.9 million

Agriculture sector losses

Green Industry

Includes container nursery, field nursery, greenhouse and turf

\$13 million

Direct losses: structures

Estimated by Julie Campbell and Matthew Chappell, Horticulture; and Ben Campbell, Agricultural and Applied Economics

Peanuts

\$10–20 million

Direct losses

Estimated by W. Scott Monfort, Crop and Soil Sciences; Jeffrey H. Dorfman and Adam Rabinowitz, Agricultural and Applied Economics

\$1.6 million

Agriculture sector losses



Pecans

\$100 million

Direct losses: crops

\$260 million

Direct losses: trees

\$200 million

Direct losses: future income

Estimated by Lenny Wells, Horticulture; Esendugue Greg Fonsah and Jeffrey H. Dorfman, Agricultural and Applied Economics

\$24.7 million

Agriculture sector losses

Poultry

\$20 million

Direct losses: houses

\$8 million

Direct losses: birds

Estimated by Jeffrey H. Dorfman, Agricultural and Applied Economics; Casey Ritz, Poultry Science

\$20 million

Agriculture sector losses

Soybeans

\$10 million

Direct losses

Estimated by Jeffrey H. Dorfman, Agricultural and Applied Economics; Mark Freeman, Crop and Soil Sciences

\$0.7 million

Agriculture sector losses



Timber

\$763 million

Direct losses

Estimated by the Georgia Forestry Commission

\$170 million

Agriculture sector losses

Estimated by the Georgia Forestry Commission

Vegetables

\$480 million

Direct losses

Estimated by Esendugue Greg Fonsah, Agricultural and Applied Economics; Bhabesh Dutta, Plant Pathology; and Timothy Coolong and Andre Luiz Biscara Ribeiro da Silva, Horticulture

\$69 million

Agriculture sector losses



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DISASTER RELIEF RESOURCES

FOR FARMERS & PRODUCERS

Hurricanes and other weather events can be especially devastating for farmers and producers, both economically and emotionally. While government programs can never fully relieve losses, there are a number of resources that are available to help farmers recover from disaster.



First Steps

COLLECT DOCUMENTATION

Prior to starting any cleanup activity, make sure to take pictures of damage and losses that have occurred.

CONTACT YOUR INSURANCE AGENT

If you have crop insurance, contact your crop insurance agent to report losses or damages. **It is important to do this before starting any cleanup activities so that everything can be documented properly.** Furthermore, farmers need to notify their crop insurance agent within 72 hours of discovery of a loss. Farmers should provide a signed, written notice within 15 days of the loss.

CONTACT THE FSA FOR ADDITIONAL ASSISTANCE

If you may be eligible for the Noninsured Crop Disaster Assistance Program (NAP) or other disaster assistance programs, contact the local U.S. Department of Agriculture (USDA) Farm Service Agency (FSA) office. **It is important to do this before starting any cleanup activities so that everything can be documented properly and a waiver can be issued prior to cleanup.**

Common Questions

What are the next steps after experiencing crop damage?

Depending on the program, contact either your crop insurance agent or local FSA office. Take pictures of the damage and do not burn any debris. An adjuster or FSA representative will need to survey the damage, so it is important to delay cleanup until damage has been assessed or cleanup permission has been granted.

Note certain crop insurance deadlines. You must notify your crop insurance agent within 72 hours of a loss, before abandoning a crop. Farmers must draft and sign a written declaration of loss within 15 days.

In addition to documenting the damage and losses, track expenses related to cleanup. It is advisable to keep records of all activities related to the disaster.

In certain situations, do farmers have to pick the crop?

This is a difficult question that depends on individual circumstances. Some issues that need to be considered are whether there is any salvage value of the crop and the quality of anything that can still be harvested. If it is a good crop, then it should be harvested. The farmer's crop insurance agent can help make a determination of how to proceed.

DISCLAIMER: The information provided in this document is not a specific recommendation. Producers should make disaster assistance decisions in consultation with their crop insurance agent, local Farm Service Agency or other government entity responsible for program administration.

Written and compiled by Adam N. Rabinowitz, Ph.D.
Assistant professor and Extension economist

If a farmer doesn't pick the crop, how bad will it hurt the established yield?

If there is crop available to pick and you choose not to, then it will count against the loss.

What if a farmer has an FSA loan on a structure that was damaged?

Contact the local FSA office immediately to report this damage.

What additional disaster relief may become available and when?

After many natural disasters that result in widespread damage, additional programs often become available to aid with agricultural losses. This is not guaranteed, however, and requires processing time for a special appropriation from the U.S. Congress and the president's approval. While a special allocation may not be immediately available, it is important to document losses and to illustrate to your legislators the impact that Hurricane Michael has had on your farming operation. This information will help drive policy decisions and additional allocations that may become available.



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