

## THE QUARTERLY

*Dedicated to the industries  
financed by CoBank*

April 2020

# Keeping Us Connected, Our Lights On, and Our Pantries Full

## Coronavirus Testing Labor and Supply Chains of Essential Rural Industries

### *Executive Summary*

The beginning of a new quarter finds us in unparalleled times – a pandemic ravaging the world, the U.S. economy in shutdown, millions of Americans out of work, and financial markets in turmoil. No one could have predicted this just a month or two ago, and yet here we are, collectively attempting to chart a new path forward. CoBank’s mission is to serve vital rural industries, and those industries have never been more essential than they are right now.

The suddenness of the crisis is forcing the power, agriculture/food, water, and communications industries to adapt quickly to maintain continuity in their operations. Agricultural processors are transitioning from supplying restaurants to keeping grocery shelves stocked. The power sector is grappling with declines in demand and wild volatility in fuel prices. Demand for water has also shifted from commercial use to residential, altering needs for many water authorities. And broadband providers are keeping up with a massive shift in internet usage. All are preparing for the risk of staffing shortages.

This quarter will largely define the next year as it relates to the economy and how severe the coronavirus damage will be. But on the other side of this quarter is recovery, and more secure times for everyone. ■

### Topics In this Issue:

- *COVID-19 Disrupts Labor, Supply Chains and Consumer Behavior*
- *Ethanol Continues Navigating Intense Stressors*
- *Rip and Replace Federal Support Coming for Rural Telecom*

*This quarterly update is prepared by the Knowledge Exchange Division and covers the key industries served by CoBank, including the agricultural markets and the rural infrastructure industries.*

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# SPOTLIGHT COVID-19

## COVID-19 Underscores Essential Rural Industries



By Dan Kowalski

**COVID-19 has turned life, as we know it, upside down.** For most businesses, the sudden stop to the economy is more jolting than the financial crisis of 2008-09, and has forced hard, immediate choices about employees and finances.

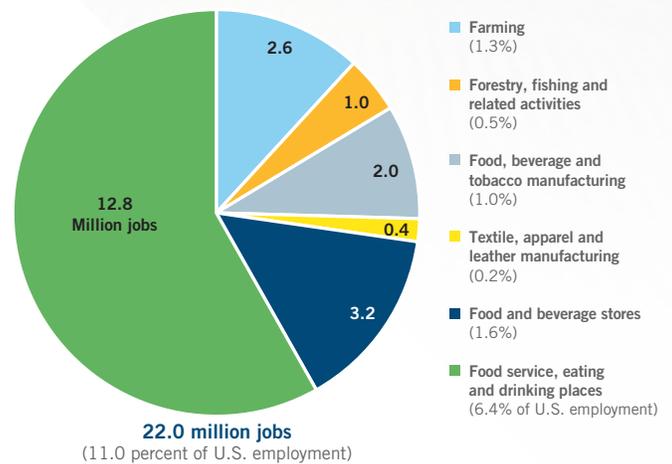
CoBank customers are uniquely positioned as essential to the fabric of U.S. society – they supply food, electricity, communication, water, and health services. Being essential means these sectors will be insulated from the worst of the coronavirus financial impacts. But this mission makes it all the more important that they maintain normal operations while many other businesses have temporarily shut down and many employees work from home.

As the coronavirus continues to spread, the biggest challenges for our customers are labor and supply chain disruptions. Transforming agricultural goods into food is process-intensive. The delivery of water, electricity, and phone/internet services happens only with people on the ground to solve problems. Keeping these key functions staffed, and navigating logistics disruptions, will be paramount to keeping the lights on and keeping us all fed.

Food distribution has been disrupted almost overnight, causing processors of dairy, meat, and produce to reorient production and supply chains in real time. Many of the 13 million jobs in food service have been eliminated, and grocery chains are hiring as they adjust to the monumental shift of consumers purchasing nearly 90% of their food at supermarkets, up from 48%.

The pandemic is challenging for all of us, and things are unlikely to return to normal soon. But for CoBank’s customers, it also presents an opportunity to demonstrate the importance and value of our critical rural industries. And as in crises past, these sectors will quietly provide the backbone of support that America relies on for its most fundamental needs. ■

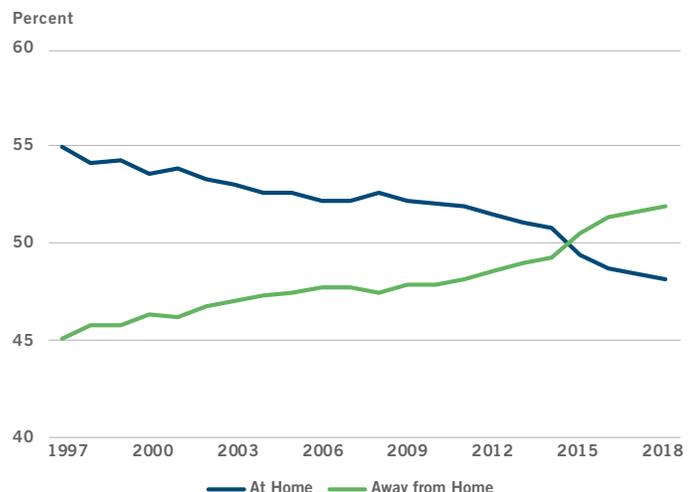
**EXHIBIT 1: Employment\* in Agriculture, Food, and Related Industries, 2018**



\* Full and part-time jobs.

Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of Economic Analysis, data as of Sept. 24, 2019.

**EXHIBIT 2: U.S. Food Expenditures**



Source: USDA-ERS

# MACRO ECONOMIC OUTLOOK

## Superlatives Fail as Economic Hibernation Sets In



By Dan Kowalski

**COVID-19 has brought the U.S. economy to a screeching halt**, and ushered in a recession in the process.

The number of U.S. coronavirus cases is now expected to peak by late April, and the economy should begin to come back to life in May. The economic damage by then will be severe. The unemployment rate in Q2 is forecast to surpass the highs of the 2008-09 recession (more than 10%), and GDP is projected to slump upwards of 15-20% on an annualized basis. If the economy snaps back as expected, GDP growth will be moderate in Q3 (estimated at 3-5%) and robust in Q4 (estimated at 12-18%).

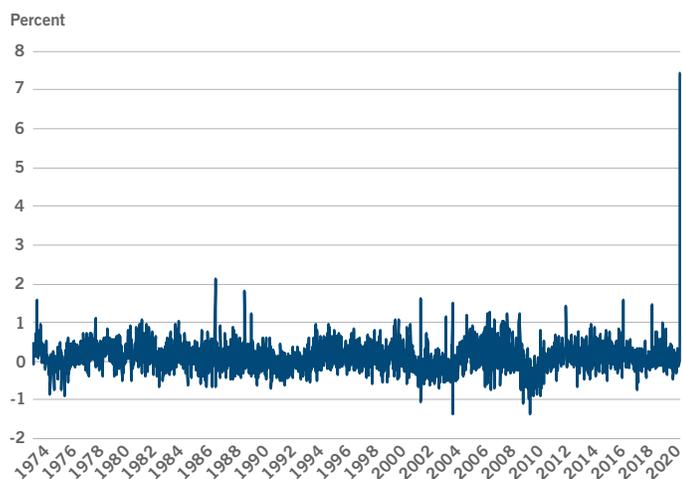
To ensure that consumers and businesses can survive the hibernation and be part of the post-virus boom, the Federal Reserve and Congress have unleashed a one-two punch of monetary and fiscal stimulus measuring in the trillions of dollars. To steady financial markets and ensure adequate liquidity, the Fed has authorized open-ended purchases of Treasuries and other securities, ballooning the size of its balance sheet. The \$2.2 trillion CARES act signed into law on March 27 dwarfs the amount spent over several years during the recovery from the 2008 crisis.

This relief will soften the blow for many consumers and businesses but it will not hasten the return to normalcy. Before we get there, tens of millions will lose their jobs, and some will find new jobs amidst the fastest reallocation of labor since the Second World War. U.S. business loan balances have already surged to a record, and corporate spreads on high yield debt have more than doubled in the past month. Consumers are starting to tap home equity lines as April bills come due, and delinquencies on credit cards, mortgages, and auto loans will begin rising.

**1** Ushering an economy that accounts for **25% of global GDP** through two months of dormancy, and trying to keep it relatively intact, **will come at an expense this country has never experienced.**

**2** There will be **nothing smooth or precise** about the **contraction or the recovery.**

**EXHIBIT 1: U.S. Business Loans, Weekly Percent Change**



Source: St. Louis Federal Reserve

**EXHIBIT 2: High Yield Corporate Bond Spread vs. 10-yr Treasuries**



Source: St. Louis Federal Reserve

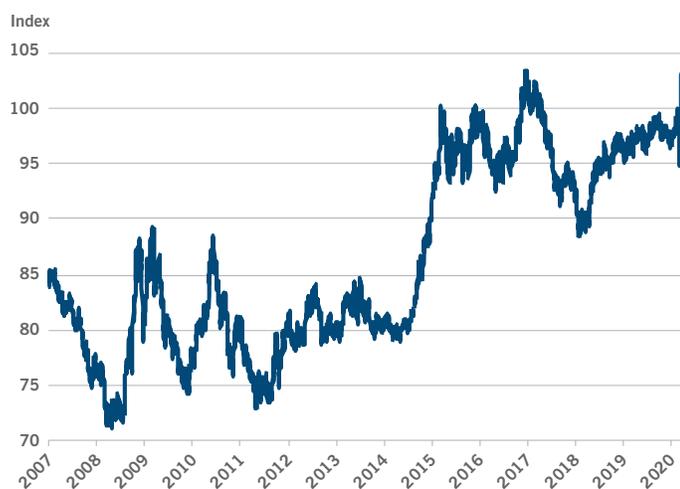
Exporters are still hampered with a very strong U.S. dollar, as investors flock to the safe haven currency. The medium term direction of the dollar is much less clear now than a few weeks ago, however. With the Federal funds rate now at zero, global government bond rates converging, and the U.S. outspending other countries on fiscal relief, the dollar could weaken as the pandemic subsides. During the 2008-09 crisis, that is exactly what happened – the dollar peaked with the crisis on panic buying, and fell as the economic threat diminished.

There will be nothing smooth or precise about the contraction or the recovery – nearly everyone will be impacted on the way down to varying degrees, and the pace of the recovery will be very uneven. Ushering an economy that accounts for 25% of global GDP through two months of dormancy, and trying to keep it relatively intact, will come at an expense this country has never experienced. The national deficit was expected to be roughly 5% of GDP in 2020, and now will be somewhere in the range of 12-13%, the highest since World War II. But not spending the trillions necessary to bridge the gap would have been catastrophic, and left us with a country that would be unrecognizable when the tide of the crisis finally goes out.

There is hope on the other side of this. The economy was on good footing when we entered the shutdown, and there is good reason to believe we can get back to reasonable strength within a few quarters. But for now, the Fed and Congress will have to keep the ship floating until it can sail again on its own. ■

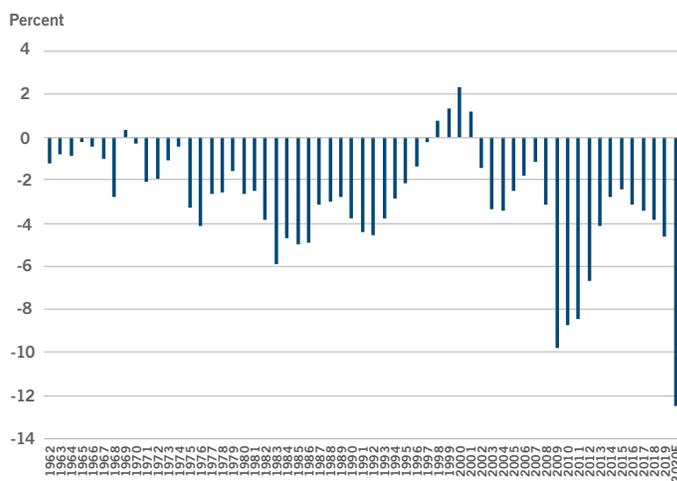
**3** The economy was on good footing when we entered the shutdown, and there is **good reason to believe we can get back to reasonable strength** within a **few quarters**.

**EXHIBIT 3: U.S. Dollar Index**



Source: Wall Street Journal

**EXHIBIT 4: U.S. Budget Deficit/Surplus as % of GDP**



Source: U.S. Congressional Budget Office

# GRAINS

## Tough Crop Cycle, Macro Shocks Temper Grain Export Outlook



By Kenneth Scott Zuckerberg

**The U.S. grain sector remains stuck in a rut, with pressure on commodity prices, weakening basis for corn and soybeans in some markets, and export volatility likely over the next two to three months.**

The 2019 growing season was very difficult financially and operationally, as poor weather and trade tensions put downward pressure on grain producers and elevators. Just as the stress was lifting in January following the Phase One trade deal with China, the COVID-19 virus emerged and began spreading on a global scale. While the pandemic will have negative global economic implications, grain export activity is mixed and holding up a bit better than expected. We expect considerable volatility and variability in month-to-month export volumes, with the real risk of a near-term slowdown to be offset by a pickup in activity during the second half of 2020.

Since 2020 began, grain prices have fallen meaningfully. Prices have declined for corn by 12% and soybeans by 7%. Wheat prices are flat. Prior to recent events, basis had tightened for corn and soybeans but had remained wide for wheat. Given increased stress on ethanol – stemming from the collapse in prices due to the Saudi-Russia price war coupled with evaporating demand due to COVID-19 related restrictions – we expect corn basis to weaken as updated bids are reported.

**1** The resolution of several major U.S. trade disputes (with China, Canada, Mexico, and Japan) initially boosted optimism that U.S. grain exports would increase in 2020. **Then came the coronavirus.**

EXHIBIT 2: Soybean Exports

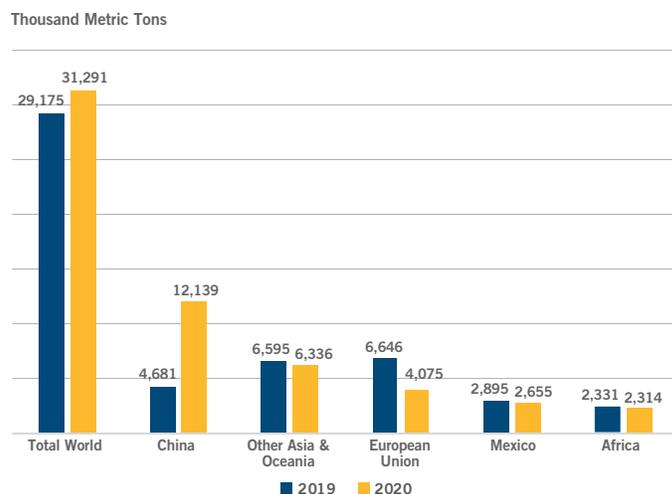


EXHIBIT 1: Corn Exports

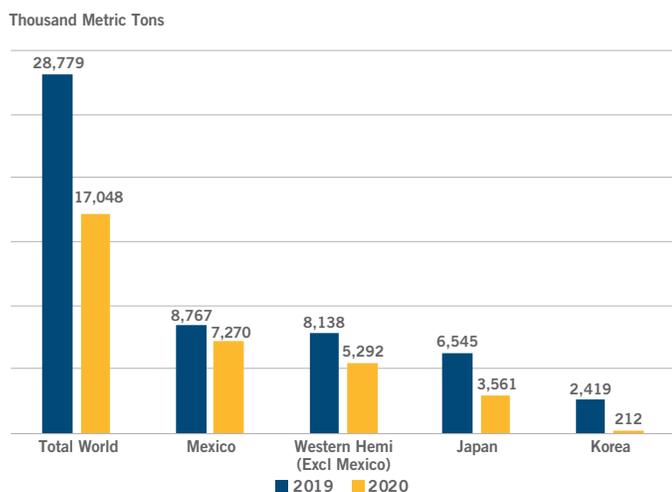
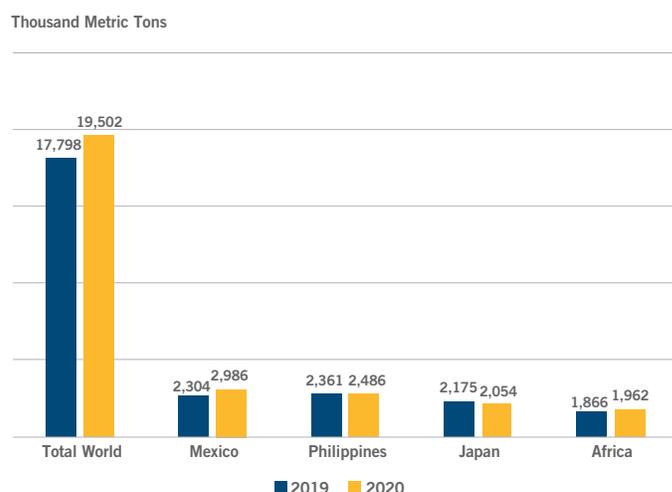


EXHIBIT 3: All Wheat Exports



Source, all charts this page: USDA-FAS, as of March 5, 2020

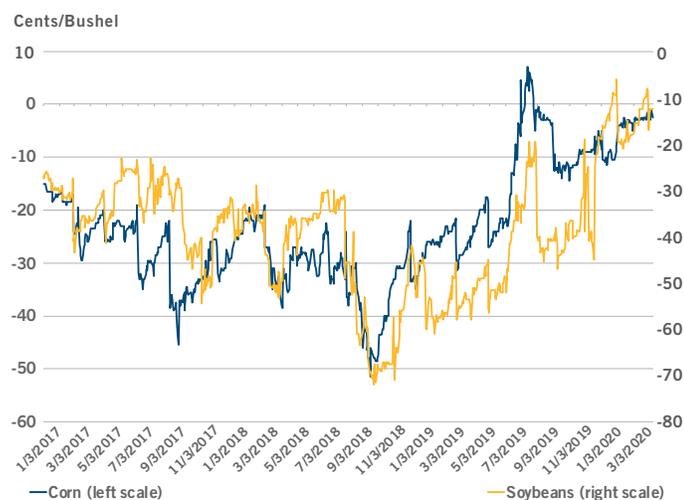
As of March 19, 2020 (marketing year to date), USDA data indicated accumulated exports YoY are 41% lower for corn, yet higher by 7% for soybeans and 10% for wheat. The drop in corn exports to Japan, Korea, Mexico, and other Western Hemisphere countries was due in part to lower quality of U.S. grain compared to Brazil's. The strength in soybean exports is driven by China, with cumulative U.S. exports totaling 12.1 million metric tons as of the March 2020 reading, which was 160% higher than the corresponding period in 2019. The 10% increase in wheat exports is driven by a 31% increase in exports to Mexico, which we view as a very good sign, given that USMCA trade deal was ratified by all parties in mid-March. Strong Chinese purchases of U.S. wheat are also hopeful signs of China's commitment to fulfilling its Phase One agreement pledges. Russia's export quota on wheat to stem the rise in Russian flour and bread prices will offer further support for U.S. wheat exports in Q2.

Our short-term outlook for grain export activity is guarded, however, for three reasons. First, the depreciation of the Brazilian real relative to the U.S. dollar increases the price attractiveness of grain produced in that country, which has already overtaken the U.S. as the world's largest soybean producer. Second, recent closures of various countries' borders and ports, a measure intended to contain any further spread of the coronavirus, could disrupt grain trade flows during April and possibly longer. Third, the global economic downturn poses significant risk for U.S. exporters. Uncertainties range from volatility in export demand to uncertain farm and supply chain labor. ■

**2** As of early March, current marketing year accumulated **export volumes are mixed**. While **corn was 41% lower** YoY, **soybeans and wheat were 7% and 10% higher**, respectively.

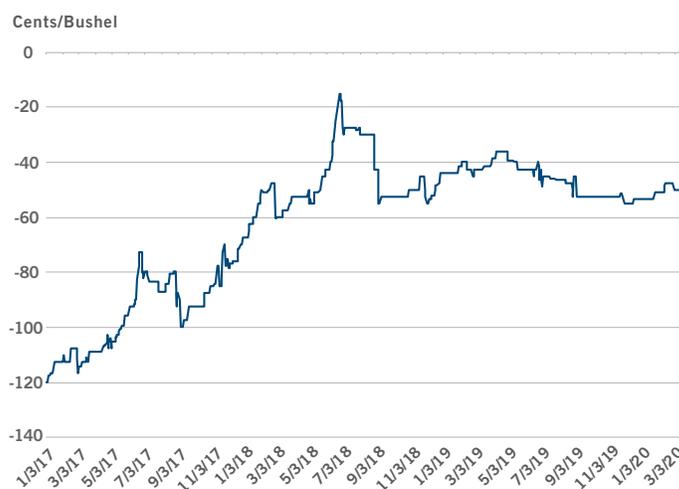
**3** Basis has widened recently for corn **due to the collapse of ethanol prices and demand**.

**EXHIBIT 4: Central Illinois Corn and Soybean Basis**



Source, all charts this page: USDA-AMS

**EXHIBIT 5: Hard Red Winter Wheat Basis - Western Kansas January 2017 to March 2020**



# FARM SUPPLY

## Retailers are Well-Positioned for a Planted-Acres Rebound, Barring Wet Weather



By Kenneth Scott Zuckerberg

**While crop farming fundamentals remain challenging, retailers enter the 2020 growing season on relatively stable footing.** Last year's growing season was complicated and tumultuous, with bad weather and excessive flooding greatly limiting fall fertilizer applications. However, with significant progress made in harvesting the remaining corn fields in recent weeks in the Northern Plains, farm supply companies are anticipating a full agronomy season this spring with farmers playing catch up on fertilizer applications.

Soggy fields in some areas of the Corn Belt, though, may impede field operations this spring and crimp custom spraying business and delay agronomy sales in the event of wet weather. Weather permitting, ag retailers have an opportunity to deliver sales and value-added services based on the following:

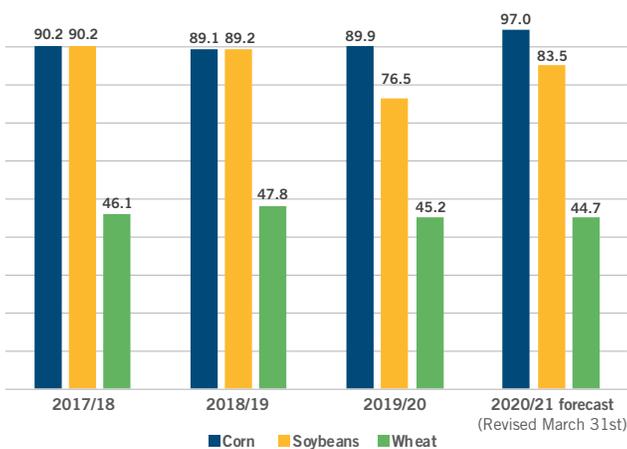
- Seed, fertilizer and crop protection chemical inventories held by CoBank's farm supply cooperative customers looked remarkably similar at the end of 2019 vs. 2018. This indicates sufficient inventories for 2020's projected planted acreage increases for corn (7.3 million) and soybeans (7.4 million).
- Farmer prepayments on agronomic inventories through November 2019 are level with last year, suggesting that farmers had sufficient capital heading into this year's growing season.
- Fertilizer prices have been increasing thus far in 2020, reflecting the expected increase in planted acreage and large spring applications. It also reflects COVID-19-driven shortage concerns of certain imported fertilizers and chemicals. The increase in nutrient prices, while still affordable, is positive for retailer sales margins. ■

**1** Ag retailers are optimistic for a full agronomy season given **pent-up demand for fertilizer and crop protection products** following last year's **complicated and wet fall** application season.

**2** Cooperative-owned agronomic inventories are **adequate to meet customer needs during the 2020 planting season**, notwithstanding **COVID-19's potential impact** on fertilizer and chemical supply chains.

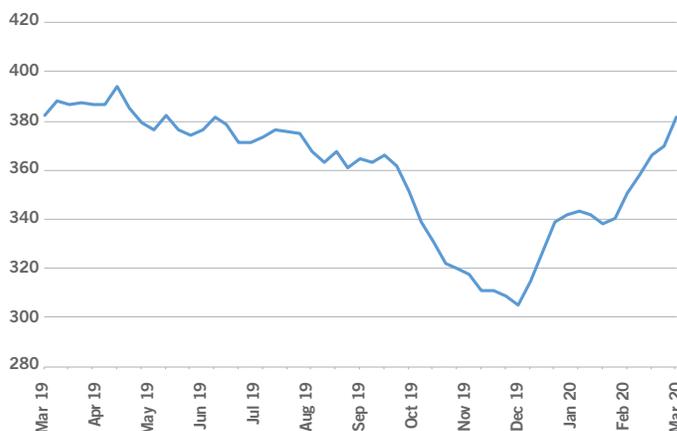
**3** Domestic supply chains are **functioning well**, although the continued spread of coronavirus and the **risk of labor shortages could disrupt grain transportation** in the coming months.

EXHIBIT 1: USDA Acres Planted



Source: USDA-NASS March 31, 2020

EXHIBIT 2: Green Markets Weekly North America Fertilizer Price Index - March 2019 to March 2020



Source: Green Markets, FertilizerPricing.com © Bloomberg L.P.

# BIOFUELS

## Ethanol Continues Navigating Intense Stressors



By Kenneth Scott Zuckerman

**The U.S. ethanol complex is navigating through an extremely difficult operating environment exacerbated by the recent collapse in crude oil and gasoline prices and a virtual overnight evaporation in demand.**

Following a period of expansion and investments to modernize technology, domestic ethanol is experiencing extreme margin pressures due to three factors.

The first factor is fierce competition from Brazil, which has expanded its global market share from 26% in 2017 to 30% in 2019, compared to 60% and 54% for the U.S. The second factor is massive production cuts resulting from the combination of an unexpected price and demand shock over the past month due to the Saudi Arabia-Russia oil price war and COVID-19 economic activity restrictions. The third factor is structural changes in long-term demand due to urbanization, the increased use of ride sharing services, and the mass-adoption of electric vehicles.

Another lingering issue had been adverse government policies on small refinery exemptions (SRE) under the Renewable Fuel Standard, though now it seems to have resolved itself favorably. The administration recently decided to avoid appealing a January 2020 court decision that struck down three SREs, with the court arguing that EPA stepped outside its authority in granting three exemptions.

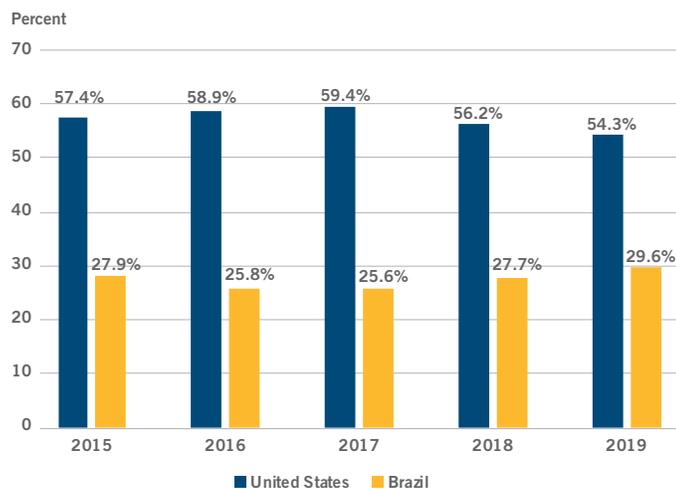
In summary, ethanol is facing several near- and long-term challenges. However, some highly efficient operators may be able to use current disruption to their long-term advantage through consolidation. ■

**1** The **recent gasoline price shock** coupled with **demand destruction from COVID-19** only adds fuel to ethanol's existing fire.

**2** Several large players have been **restructuring, scaling back and/or exiting the business.** We expect more rationalization over the next three months.

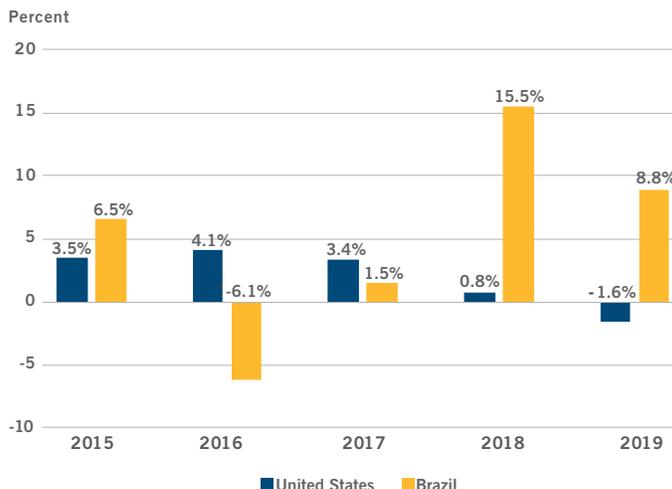
**3** Consumer preferences such as **ride-sharing services and electric-powered vehicles** will push the ethanol industry to **adjust to changing demand dynamics.**

**EXHIBIT 1: Global Market Share of Ethanol**



Source, all charts this page: Renewable Fuels Association

**EXHIBIT 2: Annual Change in Ethanol Production**



# CHICKEN

## Strong Retail Demand Lifts Chicken Margins After Weak Start to Year



By Will Sawyer

**As the U.S. chicken industry is lapping the opening of three new plants in 2019**, chicken production is up 7.7% through the first two months of 2020. This is being driven by 5.5% more birds and a 2% increase in bird weights. This growth exceeds our expectations and we anticipate 2020 chicken supply to increase by 3%-4%, up from prior estimates of 2%-3%. This implies a slower rate of margin growth for the rest of the year due to the weak chicken prices and producer profitability.

The industry entered 2020 optimistic about renewed exports to China. That focus shifted to the domestic market in early March when COVID-19 dramatically shifted the U.S. market to at-home eating, boosting chicken demand. The price of chicken breast, which is almost entirely sold domestically, has jumped in the last month beyond the expected seasonal increase. With much of U.S. ordered to stay home, foodservice demand is in question. The degree to which that demand shifts to retail will dictate how long these positive prices remain.

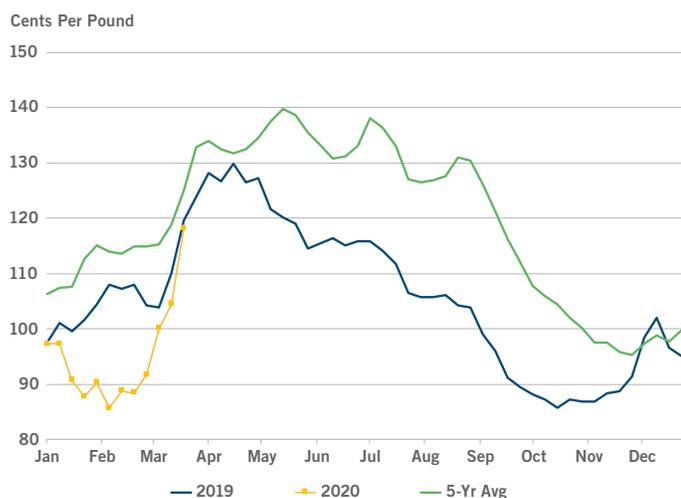
While some product was exported at the end of 2019 and this January, expectations of large exports in the first quarter have diminished as the coronavirus spread across the world. We expect China's chicken imports from the U.S. to increase this spring and summer as the coronavirus pandemic comes under control there. However, all U.S. protein processors will face two countervailing challenges in the coming months: risk of plant reductions/shutdowns due to worker illness, and cold storage facilities reaching capacity. Storage was filling up before the pandemic, and storage of cuts destined for food service only exacerbates the situation. ■

**1** Chicken production grew 7.7% in the first two months of 2020. We are bumping up our previous estimate for **2020 chicken supply growth to 3% to 4%.**

**2** The spread of the coronavirus dramatically shifted the U.S. market to at-home eating, **boosting retail chicken demand and prices.**

**3** The coronavirus outbreak will disrupt U.S. export potential until the virus is under control.

**EXHIBIT 1: Boneless Skinless Breast**



**EXHIBIT 2: Weekly U.S. Chicken Production**



Source, all charts this page: USDA AMS

# BEEF

## Loss of Restaurant and Foodservice Customers to Test Beef Prices This Spring



By Will Sawyer

**The U.S. cattle complex has seen a swift and sharp decline in the last month following the drop in global equities and oil prices.** Since mid-January, April live cattle futures have fallen about 25% and have not yet shown signs of a bottom. The market is responding in part to risk that the virus will reduce processing throughput. On March 30, that risk became reality when a JBS facility in Pennsylvania cut back production due to staff illness.

Beef production managed through the loss of a Kansas plant last fall. Now that the facility is back online to full production, beef supplies have greatly expanded. So far this year, weekly production is up 3.5%. Cattle weights have increased 2%-3% after 2019's muddy and difficult feeding conditions and both steer and heifer weights are way up. We continue to expect beef production to grow 2% in 2020 which will test domestic consumers' willingness to pay the premium prices of 2018 and 2019.

Coronavirus concerns over spring and summer demand for pork and to some degree chicken are being felt in the U.S. beef complex. But unlike the concern about international demand for pork and chicken, concern is for U.S. beef foodservice demand. Beef prices have set record premiums over pork and chicken in recent years in the midst of the longest economic expansion in U.S. history. Now that the coronavirus has nearly halted restaurant business and travel, the 2020 outlook for demand is in question. ■

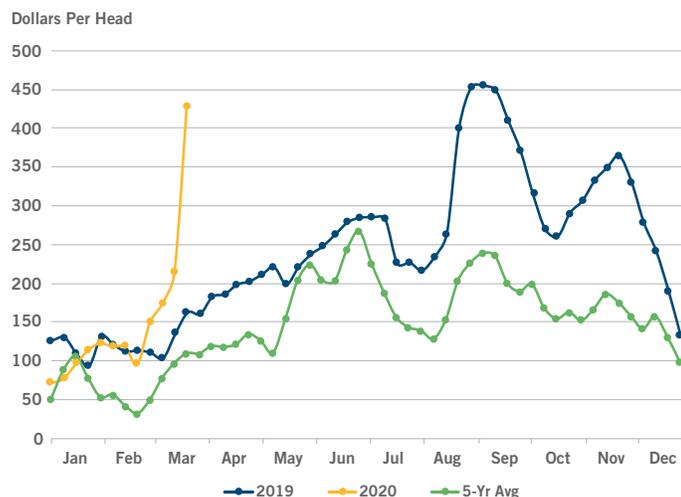
Coronavirus concerns over spring and summer demand for pork and to some degree chicken are being felt in the U.S. beef complex. But unlike the concern about international demand for pork and chicken, concern is for U.S. beef foodservice demand. Beef prices have set record premiums over pork and chicken in recent years in the midst of the longest economic expansion in U.S. history. Now that the coronavirus has nearly halted restaurant business and travel, the 2020 outlook for demand is in question. ■

**1** The effect of consumers **stocking up** in the midst of **COVID-19 fear** has **lifted** the beef cutout value.

**2** The beef complex profit pool is shifting **in favor of packers** at the **cost of lower feeding margins**.

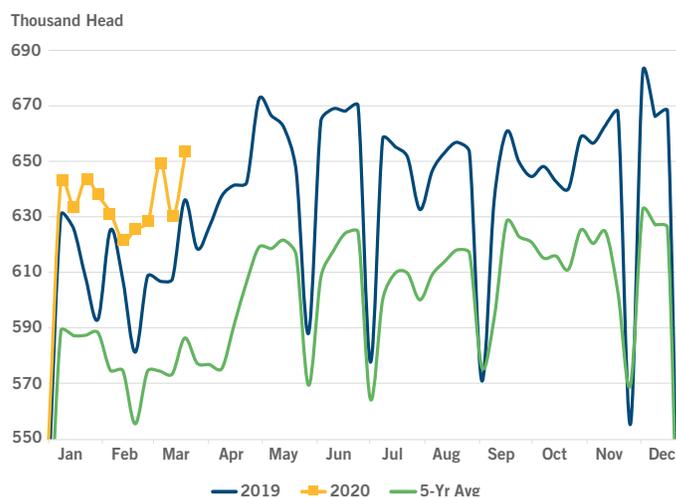
**3** **COVID-19** has all but **ended restaurant traffic**, and spring demand shock **will pressure higher value beef cuts**.

**EXHIBIT 1: U.S. Beef Packer Margins**



Source: USDA ERS, CoBank Estimates

**EXHIBIT 2: U.S. Cattle Slaughter**



Source: USDA-AMS

# PORK

## U.S. Hog Producers Seeing Little Benefit from Record Pork Exports



By Will Sawyer

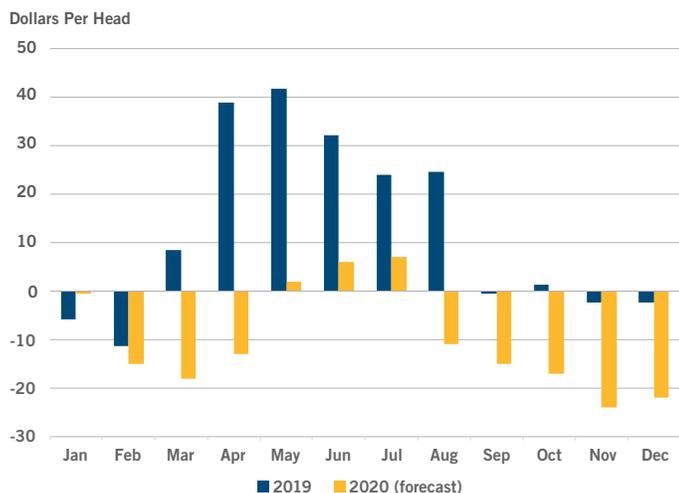
**Recently the U.S. pork sector has experienced record exports**, largely driven by the contraction of China’s hog herd due to the spread of African Swine Fever, but U.S. pork producers have little to show for it in the way of strong prices or profit margins. In both of the last two months of trade data (December and January) the U.S. set record pork exports of nearly 700 million lbs. each month accounting for 26% to 28% of domestic pork production. Despite exports increasing 30% to 40% over the same period the year before, hog prices are only up a few percent above last year.

While international demand has been significantly higher than last year, so has U.S. pork supply. Through the first two months of 2020, weekly hog slaughter has been up 5% to 6% with mostly stable hog weights versus last year. We continue to expect pork production to be up 3.5% for the year overall. As a result, domestic disappearance of pork is relatively flat preventing hog prices and producer margins from seeing much of a lift.

In fact, hog producers are expected to realize negative margins in 2020 through April and for margins to turn in to positive territory this summer. Overall, 2020 may be a break-even or just slightly above which would be quite a disappointment for the industry in light of the strong exports at the start of the year. ■

- 1 China’s demand for U.S. pork has **set export records**, but it hasn’t led to **strong prices or profit margins**.
- 2 U.S. pork export growth is **only keeping pace** with **U.S. domestic production growth**.
- 3 To realize strong margins, producers **will need strong export growth** to continue.

**EXHIBIT 1: U.S. Hog Producer Margin**



Source: Cargill Provimi

**EXHIBIT 2: IA-MN Hog Carcass Prices**



Source: USDA AMS

# DAIRY

## COVID-19 Crisis Likely to Change how Dairy is Consumed in U.S. and Globally

By Katelyn McCulloch

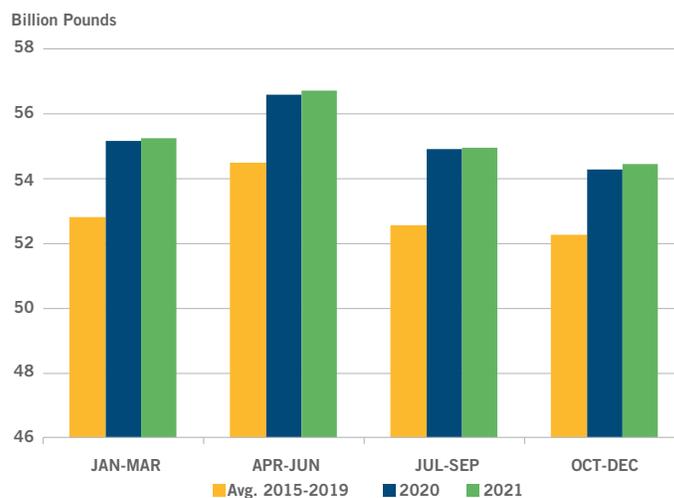
**Milk prices have fallen precipitously in recent weeks due to COVID-19.** The seasonal increase in milk supplies with the spring flush was met with economic weakness in China and other countries, impacting dairy exports. School closings in March also impacted fluid milk consumption as elementary schools consume a significant portion. Home stockpiling has provided some price support, but not enough to offset the losses related to food service.

Falling cow numbers last year, though, have balanced the demand impacts from the coronavirus outbreak. In 2020, milk prices have, again, fallen from recent highs. Weaker consumer demand in the weeks and months ahead will weigh heavily on the Q2 outlook as restaurant and food service shutdowns impact how dairy is consumed.

The largest impact is not necessarily going to be in domestic consumption since many dairy products are consumed at home, but shifts between products is possible. If consumers pull back on spending, it seems likely they will pull back on some premium dairy products as well. But so far, consumer stockpiling has boosted sales for nearly all dairy products including yogurt, butter, cheese, fluid milk, and products containing a lot of dairy such as frozen pizza.

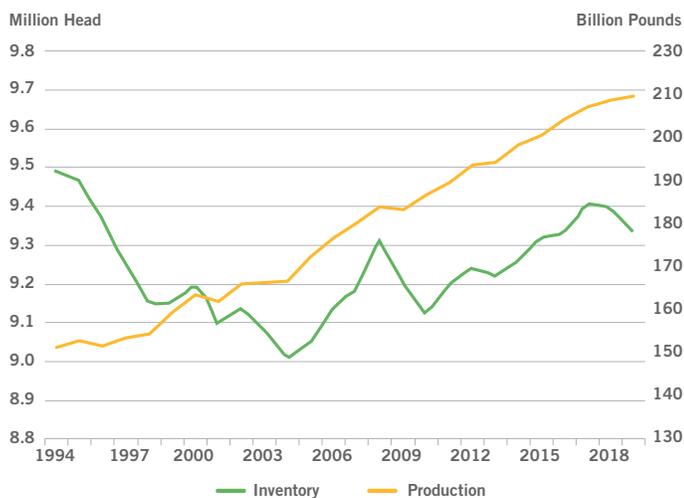
**1** School closures and a recession resulting from the COVID-19 outbreak will impact how dairy is consumed in the U.S.

**EXHIBIT 2: Milk Production Forecasts**  
U.S. Total, Quarterly



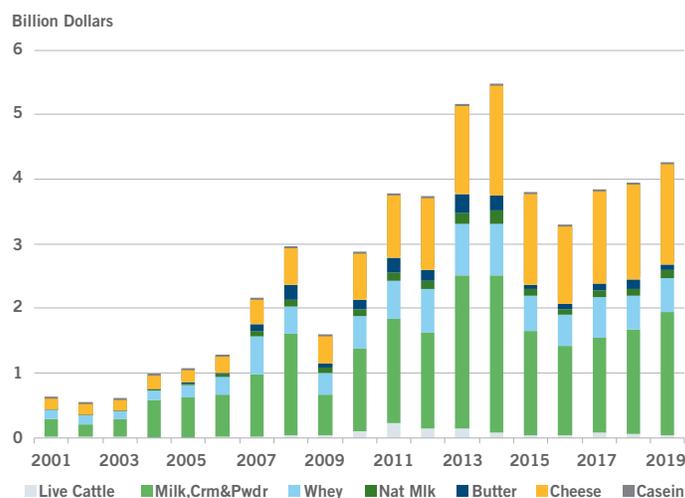
Source: USDA-NASS, Forecasts by LMIC

**EXHIBIT 1: Milk Production vs. Milk Cow Inventory**  
Average Annual Inventory, U.S.



Source: USDA/NASS

**EXHIBIT 3: U.S. Dairy Industry Export Values**  
Annual



Source: USDA-FAS, Compilation and Analysis by LMIC

Dairy slaughter in the first quarter has slipped below a year ago, in part because of the extensive liquidation in the previous year. The dairy herd is slightly below year ago figures and milk per cow has also rebounded, suggesting 2020 total milk production will grow.

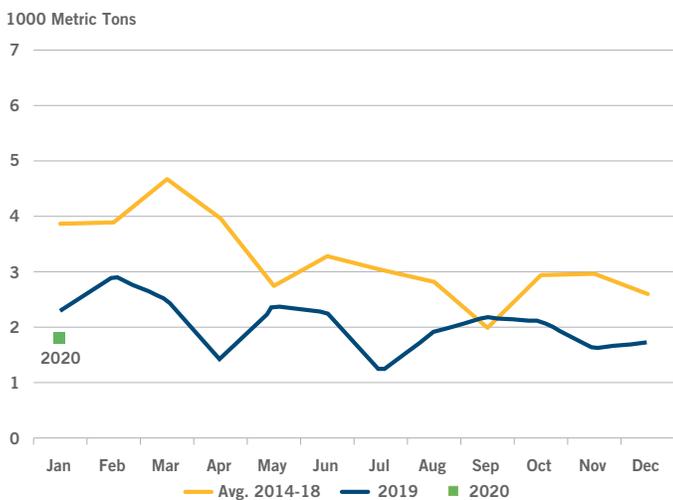
The global pandemic has raised the level of uncertainty on the trade front. In 2019, higher values were seen in aggregate fluid products, soft products (buttermilk, cream, yogurt, etc.), and cheese categories. The U.S. was heavily focused on negotiating trade deals, and tariff wars created a new dimension for projecting exports. This year, the pandemic could slow U.S. exports.

Nationally, average All Milk prices are expected to be similar to 2019, but volatility is likely in commodity products and among classes of milk. A stable-to-slowly shrinking cow herd will keep milk production figures in check while the world emerges from a global pandemic. Feed costs are expected to be lower, which will also help dairy farmers weather this uncertain time. ■

**2 Dairy cow slaughter has slowed** following last year's **extensive liquidation**.

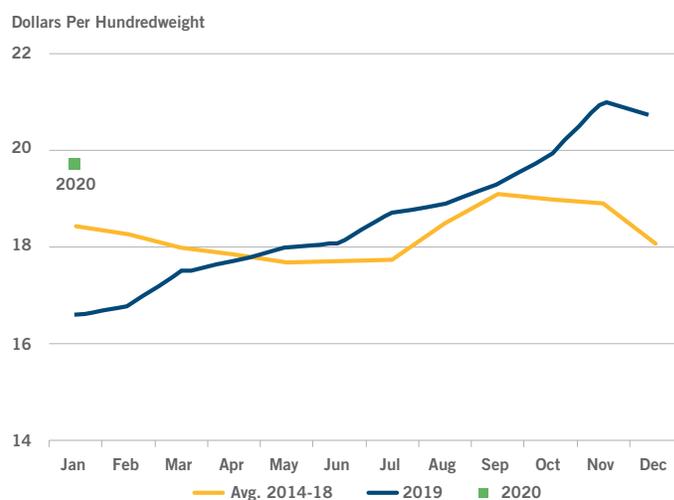
**3 Global dairy trade** has become more **uncertain amidst the global pandemic** with a **renewed focus on public health** likely to affect exports.

**EXHIBIT 4: Butter and Oil Exports**  
*Monthly*



Source: USDA-FAS

**EXHIBIT 5: All Milk Price**  
*U.S., Monthly*



Source: USDA-NASS

# COTTON, RICE AND SUGAR

## Fears of COVID-19 Drive Rice Prices to New Highs and Cotton to New Lows



By Tanner Ehmke

### Cotton

Cotton prices plummeted in March as futures followed estimates for a collapse in global GDP, and the shutdown of clothing manufacturing in China in efforts to contain the spread of COVID-19. Front month cotton futures on the International Cotton Exchange fell 31% through quarter since posting its January highs. USDA's March 31 prospective plantings indicated that 13.7 million acres of cotton will be planted in 2020, down less than 1% from 2019. The recent steep drop in prices may cause some growers to rethink those plans, however.

U.S. cotton exporters are optimistic of faster export pace following India's announcement of lockdown into the first half of April, which may impair India's cotton export pace. U.S. exports for all upland cotton for the current marketing year are running 24% ahead of last year's pace with major customers Vietnam, China, and India all showing bigger purchases YoY. The sharp drop in U.S. cotton prices is also expected to help support a faster export pace in the year ahead.

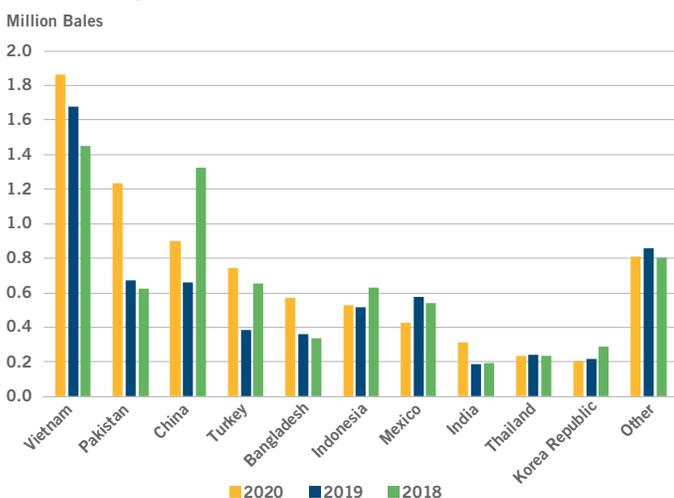
### Rice

Rough rice prices, meanwhile, whipsawed last quarter as panicked consumers stockpiled rice amidst the COVID-19 pandemonium. Retail rice sales for the week ending March 14 were up 166% YoY, according to Nielsen. Futures prices surged to a 5 1/2-year high in March before falling back to more moderate levels at the end of the

**1** Despite strong exports, cotton prices have sunk to new lows on fears of slower global economic growth.

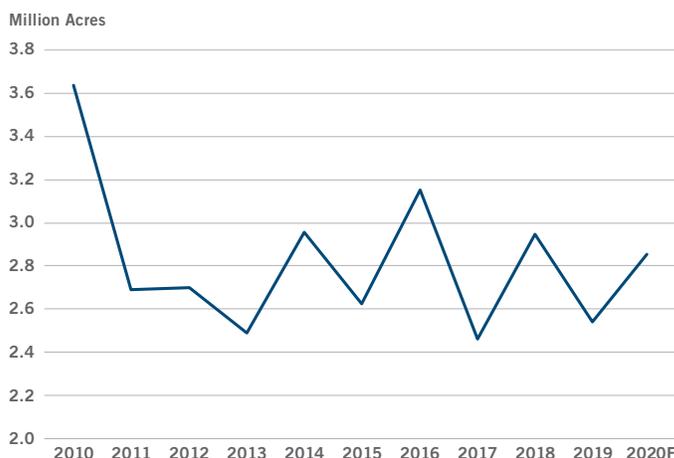
**2** Rough rice futures surged to new highs, driven by a surge in retail rice sales and tighter global stocks.

**EXHIBIT 1: U.S. Cotton: Accumulated Exports**  
For Marketing Year 08/01 - 07/31



Source: USDA-FAS Export Sales as of March 5, 2020.

**EXHIBIT 2: U.S. Rice: Acres Planted**



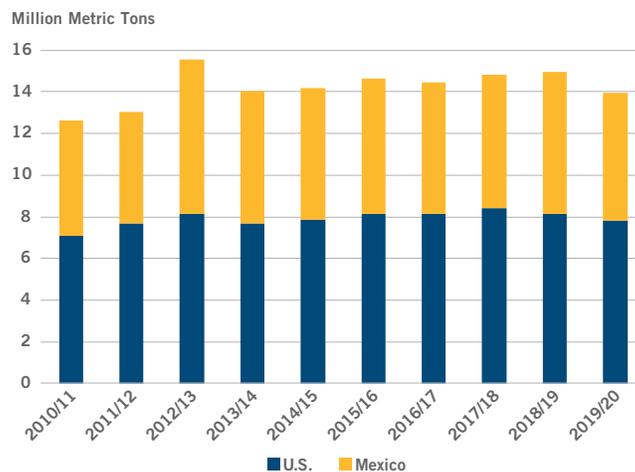
Source: USDA-OCE

quarter. It's not just U.S. consumers who are stockpiling; Asian consumers have also been hoarding rice. Fears that drought will cut rice production in Thailand have supported global rice prices, with Thai rice prices touching 6-year highs. Concerns that rice shipments from top-exporter India could be impaired by the Indian government's recently imposed lockdown have added to the fears of shortages. Focus next quarter will turn to U.S. rice planting conditions. Soggy fields and forecasts for more wet weather may jeopardize farmers' ability to plant in the Delta and mid-South. USDA prospective plantings point to 2.8 million acres of rice in 2020, up 12% from last year's difficult planting season. In contrast to cotton, though, rice acres could see a boost from the recent price run.

## Sugar

This year's beet sugar processing campaign has come to an early end for some processors following last year's abbreviated fall harvest wrought with ongoing weather complications. USDA's estimate on refined sugar production in the U.S. was revised still lower last quarter to 4.317 million STRV (short-tons, raw value), down 13% YoY. The U.S. sugarcane crop of 3.713 million STRV is 8% lower than last year. The shortfall in U.S. sugar production has placed an increased importance on imports, particularly from Mexico. Drought in Mexico, however, is raising concerns of Mexico's ability to meet U.S. import needs per the U.S.-Mexico suspension agreement on antidumping duties. USDA's latest forecast on the Mexican sugarcane crop is expected to be sharply lower – down nearly 20% – as yields slide to their lowest level in 12 years. Strong consumer demand for sugar amid crop shortages, meanwhile, has yielded a stable to strong pricing environment. ■

### EXHIBIT 3: U.S. and Mexican Sugar Production



Source: USDA-FAS

**3** A shortfall in Mexican cane sugar production may impair **Mexico's ability to fulfill** the suspension agreement with the U.S.

# SPECIALTY CROPS

## COVID-19 May Impact Seasonal Farm Labor, California's Water Law will Stress Irrigators



By Tanner Ehmke

### U.S. specialty crop growers are fearing an even tighter labor situation unfolding this spring

as processing of new H-2A farmworker visa applications in Mexico is complicated by COVID-19. In March, the U.S. Embassy in Mexico announced it would suspend processing routine immigrant and non-immigrant visas in an effort to curb the spread of the coronavirus. The U.S.

Consulate General in Monterrey, where most H-2A visas are issued in Mexico, then announced it will continue processing H2 visas, but will modify the application process to ensure social distancing.

More than nine out of 10 H2-A visas in 2019 came from Mexico. The greater level of uncertainty on seasonal farmworker availability from Mexico and the possible reduced efficiency of visa processing has elevated the concern of U.S. specialty crops growers' ability to staff harvest operations amid an already tight labor supply. U.S. growers are also concerned about the heightened risk of farmworkers contracting the coronavirus in the middle of harvest. Leafy greens, celery, broccoli, cauliflower, radishes and melons in California and the Southwestern U.S. are crops that could be affected by a sickened workforce or a reduced availability of H2-A workers during harvest in the weeks ahead.

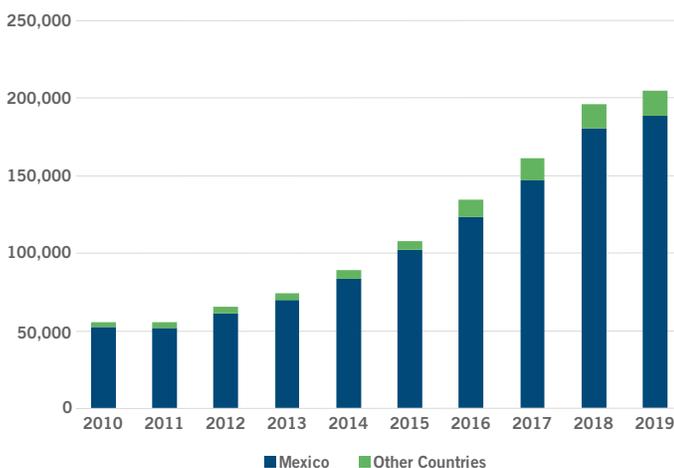
Much of the Florida citrus harvest, meanwhile, is nearing its conclusion, limiting some of the risk of H2-A worker staffing issues for citrus producers. Valencia orange harvest, though, which is picked from March to June, could be impacted by potential shortages of field workers. Citrus growers are struggling with other issues this harvest season

**1** Potential H2-A visa restrictions related to COVID-19 are raising concerns of U.S. specialty crops growers having sufficient field workers to harvest crops.

**2** Specialty crop growers are benefitting from the surge in produce sales at grocery stores, but saw reduced exports due to logistical issues related to COVID-19.

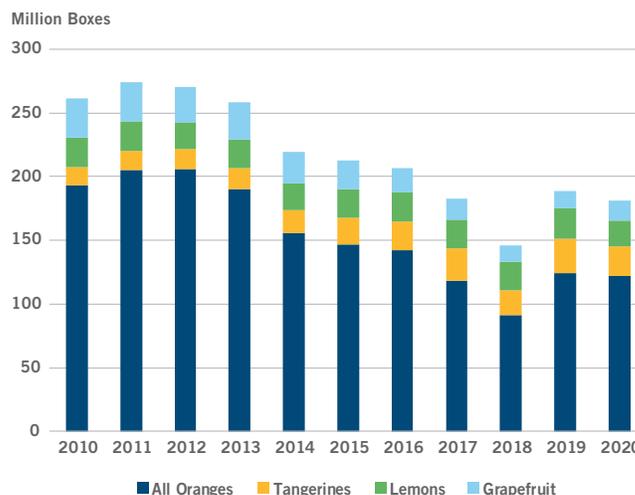
**3** Implementation of SGMA water restrictions in California will stress growers with the state already struggling with drought conditions

EXHIBIT 1: H-2A Visas Issued



Source: U.S. Department of Labor, Office of Foreign Labor Certification

EXHIBIT 2: U.S. Citrus Production



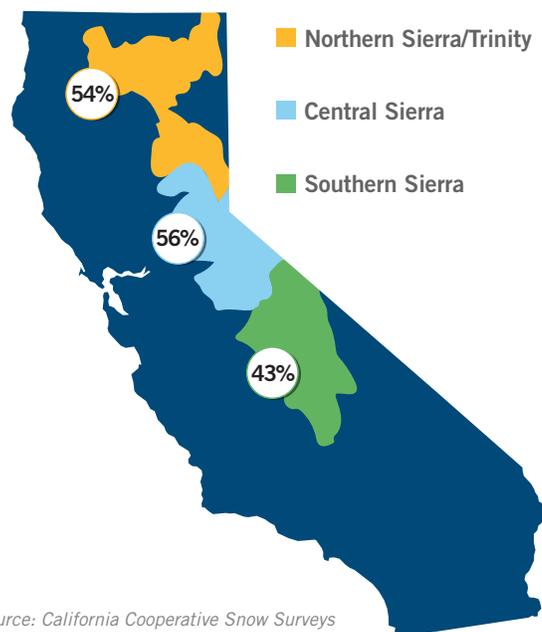
Source: USDA-NASS

**EXHIBIT 3: Water Equivalents Percent Normal for March 26**

including reduced fruit size and more droppage compared to prior years. USDA estimates the total U.S. orange crop this year at 71 million boxes, down 1% YoY. Lemon and tangerine production were both down roughly 15% YoY, while the grapefruit crop was up 14% from last year, according to USDA's March estimate.

As consumers stockpiled food during the COVID-19 scare, the specialty crops sector has benefited from the surge in produce sales at grocery stores. Strawberry growers, for instance, shipped 21.9 million flats through March 22, which was a 21% increase YoY, according to the California Strawberry Commission. However, tempering the increased retail sales were sharp reductions in food service sales. Fruit, nut, and vegetable exports, meanwhile, were down especially to Asia due to supply chain issues resulting from the spread of the coronavirus.

Looking ahead to Q2, drought concerns are building in California with 40% of the state experiencing moderate drought, according to the United States Drought Monitor. The Sierra Nevada mountains snowpack is roughly half of normal levels following the driest February on record. Reservoir levels, though, are near historic averages following last year's increased precipitation and a wetter March. The potential reduction in water availability for California irrigators comes at a time when growers in critically over drafted basins have submitted Sustainable Groundwater Management Act (SGMA) plans. As they are implemented, the plans may reduce groundwater availability for irrigation. A study conducted at the University of California, Berkeley estimated that SGMA could result in 1 million acres being fallowed. ■



Source: California Cooperative Snow Surveys

# POWER, ENERGY AND WATER

## Quarantines, Oil and Gas Oversupply Bring Challenges for Energy and Water Sectors



By Tom Binet

### Power and Energy

Broad segments of the power and energy sectors are likely to realize falling revenues in Q2 2020 and possibly beyond. Electric utilities will suffer from weakening electricity consumption by the commercial and industrial (C&I) sectors. Over the same time frame, the extreme oversupply of both crude oil and natural gas globally will keep prices at historic lows, disrupting cash flows for virtually all producers, as well as their vendors.

While we don't yet have detailed economic output data for March 2020, policy responses to the COVID-19 pandemic are clearly having an effect. Ongoing supply chain interruptions, social distancing policies, and diminished consumer demand are placing significant downward pressure on C&I electricity consumption, which typically accounts for two-thirds of the U.S. total.<sup>1</sup> Daily electricity consumption for the first three weeks of March 2020 has been lower in most regions than the three year average.

With Henry Hub natural gas futures pricing below \$2/MMBtu April-August 2020, natural gas-fired power plants are likely to become even more economically advantaged relative to other thermal generators in the near-term. This factor, combined with low demand for power nationally may result in more retirements of coal-fired power generating capacity than the 7.6 GW already slated to come offline this year.

Given this uncertainty, and absent stimulus of the power and energy sectors via federal legislation (e.g., an infrastructure bill) or otherwise, nonessential capex by electric utilities, oil and gas producers, and their vendors will likely be delayed and/or pared back greatly.

### Rural Water Systems

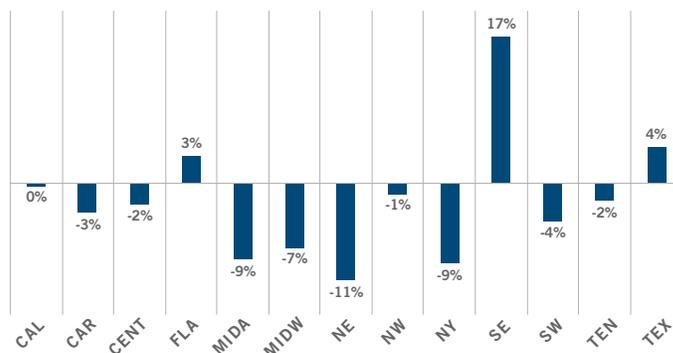
Rural water systems will face new and familiar challenges during the recession in Q2 2020 and beyond. These include decreasing commercial and industrial consumption, periodic staff shortages, an increase in delinquent accounts, and misinformation concerning water quality.

**1** Daily electricity consumption for the first three weeks of March 2020 has **been lower** in most regions **than the three year average**.

**2** Nonessential capex by **electric utilities, oil and gas producers**, and their vendors will **likely be delayed and/or pared back greatly**.

**3** Drop in electricity demand has electric utilities **dialing back their coal- and natural gas-fired power generators**, which in turn **require less water than normal** for cooling purposes.

**EXHIBIT 1: Change in Electricity Consumption in March: 2020 vs 3-Year Average<sup>2</sup>**



Source: EPA

As the U.S.' two largest consumers of water – thermal power generation and agriculture – face their own economic turbulence, many rural water providers will realize cash flow disruption in the weeks and months ahead. Electricity demand in March is proving abnormally low in many areas, so electric utilities are dialing back their coal- and natural gas-fired power generators, which therefore require less water than normal for cooling purposes. Water-intensive agricultural sectors such as cotton, fruit, and animal protein all operate in highly dynamic and competitive markets, which may periodically dampen their production activity and water consumption. Many ethanol producers across the country, who also consume immense amounts of water, foresee operating with negative margins for months, and potential insolvency in Q2 2020.



Water systems serving primarily residential customers may see somewhat higher consumption as companies, schools, and local governments implement social distancing measures to combat COVID-19. However, those same utilities could also face rising rates of account delinquency as unemployment rises. This will be especially true of those utilities serving low- to moderate-income areas, as is all too common in rural America.

The water industry, the Centers for Disease Control and Prevention, and others are being forced to respond to alarmist, misleading news reports that the coronavirus can be transmitted through drinking water systems. Utilities, even those which are fully staffed, can ill afford such distractions right now. ■

<sup>1</sup>Source: EPA.

<sup>2</sup>EIA's *Hourly Electric Grid Monitor*, which depicts EIA's Form EIA-930 data.

# COMMUNICATIONS

## Federal Support Helps Telecom Equipment Ban, But Challenges Remain



By Jeff Johnston

President Trump has signed the Secure and Trusted Communications Networks Act, which includes \$1 billion in federal support to pay for the cost to rip and replace non-compliant communications equipment in U.S. networks. The funds will be available to U.S. communications companies that have less than 2 million customers. Companies will have one year from the date they receive reimbursement funds to complete the rip and replace; however, if they meet certain conditions this date can be extended. The Federal Communications Commission will provide a list of covered communications equipment and service providers that must be used in order to receive the reimbursement funds.

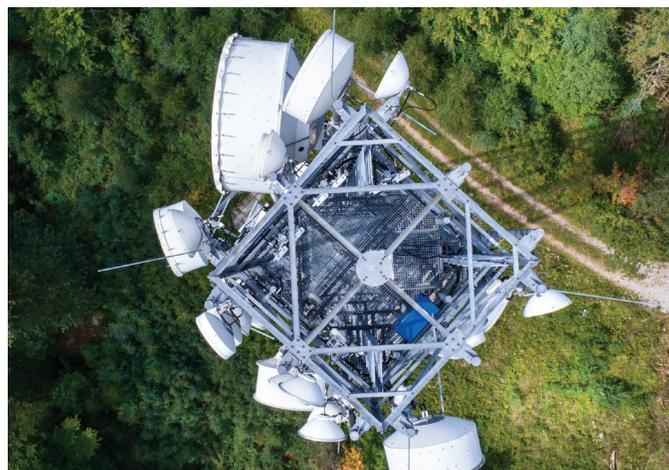
This government support was needed to ensure rural telecom operators comply with the recent ban on Chinese-made telecom equipment. However, while the cost to rip and replace will be covered by the government, the undertaking comes with headaches for rural operators.

Most rural operators run lean organizations and therefore do not have the engineering and operation resources for a complete rip and replace. Doing so comes with opportunity costs as resources will be taken from developing new services for rural customers, and it will inevitably cause some service interruptions. Also, the ongoing software and hardware upgrades for the new network equipment will most certainly be more expensive as compared to Chinese-made equipment. This will put pressure on operating margins, which are already thin. ■

**1** Federal subsidies will provide **\$1 billion** to help operators **replace Chinese-made equipment in U.S. networks.**

**2** Despite the federal support, replacing non-compliant equipment **will create operational and technical challenges** for rural operators.

**3** Increased support costs for new equipment will **pressure ongoing margins** for rural operators.



This quarterly update is prepared by the Knowledge Exchange Division and covers the key industries served by CoBank, including the agricultural markets and the rural infrastructure industries.

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**CoBank's Knowledge Exchange Division welcomes readers' comments and suggestions.  
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