Economic & Policy Update

Volume 20, Issue 3

Edited by: Will Snell and Nicole Atherton

Ag, Food, and Credit Markets Amidst the COVID-19 Crisis

Will Snell, Kenny Burdine, Todd Davis, Tim Woods, Brett Wolff, Laura Powers, Jonathan Shepherd, and Tyler Mark

EDITOR'S NOTE

The Coronavirus (COVID-19) has caused unprecedented disruptions in global markets and supply chains creating much restlessness and uncertainty for the food and agricultural sector. Recognizing that we face many unknowns on the length and severity of the outbreak, government/business/consumer reactions, and long-term economic implications, our team of commodity specialists offer the following observations and insights to assist farmers and agribusinesses in their decision-making during this unsettling time.

Macro Issues

Will Snell

The coronavirus pandemic is reducing economic output worldwide, causing many economists to predict an ensuing global recession to follow. The resulting reductions in jobs and incomes is creating mayhem for many industries, such as travel, retail, events, and restaurants. The ag/food sector, especially in higher income nations, tends to be partially shielded from an economic downturn, as food is an essential consumer item. Lower incomes shift food consumption patterns (both in terms of location and what food products are consumed), but will not have a significant negative impact on the overall demand for food relative to the anticipated demand losses from other industries, noting again that the effects will be much greater for ag in less developed/lower income nations.

In the midst of this disease outbreak, global inventories reveal that food/commodity supplies appear abundant in most cases, but distribution bottlenecks, short-term labor challenges, and panic buying by consumers are causing shortages for some food products at the local level (e.g. meats, flour, eggs, pasta). Abundant supplies have enabled aggregate U.S. food prices to remain relatively stable in the short-run, but global food price inflation appears to be a looming concern as nations/food companies adjust their longer-term purchasing strategies to ensure food security and work through logistical challenges. Look for more price/income sensitive items such as meats and perishables to reflect greater price and quantity changes if the pandemic lingers. While U.S. food price inflation may not increase significantly in the short-term, total U.S. expenditures on food may increase for some families in response to consumers stockpiling food, purchasing whatever is available on grocery shelves, additional family members at home during the day, and increased carryout/delivery of food.

As restaurants and schools temporarily shut down across the nation, creative food delivery options are being adopted, while large-scale food processors are shifting product lines originally scheduled for away-from-home consumption to be packaged to accommodate consumers purchasing their food primarily in grocery stores. In response to this dramatic change in food purchasing patterns, local food producers are attempting to discover new op-

portunities to be a bigger player in the today's food distribution system.

Despite a short-term increase in food demand, many farm commodity prices have taken a significant hit for various reason as our commodity experts will explain below. Recent dives in crop and livestock prices are happening amidst a prolonged downturn in the U.S. farm economy, which has "survived" in recent years due to government injection of significant Market Facilitation Program (MFP) payment to help offset farmer's alleged losses due to on-going trade conflicts. In addition a large number of Kentucky farmers are part-time, depending on off-farm income that may be sacrificed in the near future with widespread layoffs.

In response to this massive crisis, Congress debated various economic stimulus means this past week to provide financial aid for impacted individuals, industries, and sectors, including agriculture, food companies, and rural communities. On Wednesday, March 25th, the U.S. Senate passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act 96-0, which included a $14 billion replenishment for the Agriculture Department's Commodity Credit Corporation (CCC) to supposedly fund another round of MFP payments, a separate $9.5 billion fund to aid livestock and specialty crop producers, and funding for a variety of other USDA programs to help farm producers and rural America. Additionally, this package calls for direct payments for most Americans, enhances unemployment benefits, and provides funding to improve food access and nutrition programs, which will affect future demand for foods and agricultural products. In addition, the legislation would extend the term of marketing assistance loans by an additional three months (from the current limit of nine months), and provide additional funding for broadband expansion in rural areas and additional rural development initiatives to enhance rural health care and small businesses. The House is expected to take up the bill on Friday (March 27th) which is expected to pass and be signed by the President. Click here for more details on the Senate economic stimulus bill. More specific details of how the stimulus package will affect agriculture will be forthcoming.

Entering planting season, farm inputs such as seed chemicals, fertilizer, veterinary supplies, livestock feed, and credit appear readily available, but labor remains a lingering concern. Labor availability is a critical issue as farmers face planting decisions and food processors, grocery stores, and food delivery systems need an increasing number of healthy workers to accommodate a short-term spike in food demand. Farmers, food companies and other ag businesses were very concerned when the State Department announced last week that in response to the COVISD-19 outbreak, it was temporarily suspending routine visa services from Mexico and several other nations important in suppling labor for U.S. agriculture. However, based on government reports and feedback from labor associations, it appears that certain returning H-2A workers will be granted an interview waiver and be allowed to enter the United States.

Central banks around the world are reducing interest rates in an attempt to calm financial markets, spur the economy, and provide much needed access and potentially lower cost of capital to businesses. These monetary policy changes are also impacting exchange rate markets. Despite an anticipated major hit on the U.S. economy and the Federal Reserve lowering interest rates (both factors which would generally would cause the U.S. dollar to weaken), the U.S. dollar has been increasing in recent weeks as the dollar continues to be viewed as the world's safest and most stable currency. This market event effectively reduces the price competitiveness of U.S. farm goods in the global economy. If persistent, this will constrain growth in U.S. farm exports, but will tend to put a cap on the prices of imported food items brought into the U.S., which comprise 15 to 20% of the nation's food supply.

Going forward, many unknowns, new production/marketing strategies, and unexpected consequences will evolve as farmers, ag businesses and consumers adjust to a "new normal" caused by this historic and monumental global event. Perhaps one positive outcome is that Americans and our world neighbors may have a greater appreciation of the importance and complexity and of our global food production and distribution system.

Will Snell
Extension Professor
Co-Director, Kentucky Agricultural Leadership Program
Ag Policy, Marketing, and Trade
Will.Snell@uky.edu
(859) 257-7288

Livestock Markets

Kenny Burdine

COVID-19 also represents a major shock to livestock and meat markets. Short-run supply impacts are likely to be minimal as is it does not immediately change the amount of meat being produced or the quantity of livestock in the production chain. In fact, one of the challenges for the livestock sector is that COVID-19 hit at a time when production levels across all meats were relatively high. Longer-term supply impacts are possible if producers delay marketing of livestock in response to declining prices. COVID-19 primarily represents a demand shock to the livestock and meat system and that is what markets are currently trying to work through. As COVID-19 continued to spread, meat products began flying off the grocery store shelves as consumers desired to stock up on meat products to guarantee available home supplies and to minimize future trips to retailers. While this is significant, it is also likely a short-term impact, meaning that future purchases will be lower due to increased purchases now.

The two most significant demand impacts on meat products from COVID-19 likely relate to changes in consumption patterns and the impact on the U.S. economy as a whole. While many restaurants are encouraging carryout, curbside, and other non-traditional service options, there has been as shift towards more at-home consumption. Secondly, the large number of cancellations, closings, and other shutdowns will impact employment and income for a large number of people. Since the livestock and meat sector is very diverse, the impacts will differ across species.

Cattle are likely to be the hardest hit meat product for two reasons. First, beef is likely the meat that is most affected by foodservice demand. Secondly, since beef is more expensive than other meats, it will also make it the most vulnerable to substitution if people look for cheaper meat products. In general, cattle closer to harvest have been hit the hardest by COVID-19. We have seen the largest impact on fed cattle and the smallest impact on calves. One interesting note is that slaughter cow and bull prices have actually increased over the last couple weeks, most likely due to rising hamburger consumption due to the increase in at-home consumption.

On the other end of the spectrum, poultry prices could potentially benefit from the COVID-19 market shock. Poultry is less dependent on foodservice demand and is also a much less expensive source of protein for consumers. For this reason, it is very likely that consumption will shift towards chicken and turkey in the current environment. Responses in the pork and hog markets have lied somewhere in the middle. They have been negatively impacted, but not to the extent of cattle and beef prices.

Another unique aspect of the poultry and hog markets is that they are primarily contracted driven. By nature, producers in these environments are somewhat shielded from these market impacts. However, contract producers do want to consider potential implications of this demand shock as it can potentially impact time between placements and contract renewal. There is also the potential for markets shocks to affect the value of manure and litter, however the timing will likely keep nutrient prices stable.

While dairy markets will not completely escape the wrath of COVID-19, they are likely to benefit from the fact that a large share of dairy products are consumed at home. The exception is the impact of school closures, which do account for a significant amount of fluid milk consumption. Dairy producers are also likely to be impacted by substitutions across dairy products. Higher value dairy products like yogurts and ice creams are the most likely to feel substitution effects, but in both cases, significant private label options exist. These factors combined with a smaller dairy cow herd and lower feed prices should buffer the impacts on dairy producers.

The impact on equine markets is also difficult to assess. Kentucky equine receipts had been on a very solid trajectory, trending up for the last three years. However, sale values are impacted by overall economic conditions and those sale values also impact stud fees. In both cases, a significant amount of money flows into the equine sector from outside the United States. Lower crude oil prices have the potential to decrease buying power from the Middle East. This, coupled with losses from a slowing glob-

al economy and a strengthening U.S. dollar are very likely to hurt equine sales in the near future. In addition, many sales have been cancelled and a large number of races have been either cancelled or run without spectators. It is hard to imagine that this won't have implications for the overall equine market.

Kenneth Burdine
Associate Extension Professor
Livestock Marketing and Management
Dept. of Agricultural Economics
KBurdine@uky.edu
(859) 257-7273

Grain Markets

Todd Davis

It's the End of the World as We Know It (And I Feel Fine). I make no secret that I grew up in the 1980s and often mention 1980s Pop Culture in my Extension presentations. The title of this article is from REM's 1987 song and I hope that it will help you keep the market fundamentals in perspective.

The futures market is an animal that reacts to facts and emotions. Emotion usually trumps facts in the very short term. Sometimes the emotional reaction works in a farmer's favor. The 2019 planting season illustrates the corn and soybean markets' fear of unplanted acres and late-planted crops significantly reducing production and drastically reducing stocks. The December 2019 corn futures closed at $4.68 ½ on June 17, 2019, and the November 2019 soybean futures contract closed at $9.40 ¼ on June 18, 2019, in response to the market's fear (an emotion). That fear was positive for managers able to price a percentage of their expected production.

People in agriculture easily understand the commodity market's reaction to the 2019 weather because it was based on market fundamentals. In contrast, the roller-coaster ride in 2020 is driven by the fear in the financial markets spilling into the commodity markets. At some point, the commodity markets will have to reconnect to the market fundamentals. I hope that we have reached that point where the futures market reflects old-crop fundamentals as well as what is known (or guessed) regarding 2020's crop.

The 2019 corn and soybean crops are half-way through their marketing-year, and USDA typically provides minor adjustments throughout the remaining months of the marketing year. USDA's monthly supply and demand reports for corn have made offsetting adjustments by increasing ethanol but reducing exports by the same amount. The significant reduction in oil prices due to Saudi Arabia flooding the market and reduced consumer demand for gasoline amidst the COVID-19 crisis and other factors have decimated ethanol processing profitability. As a result, corn demand for ethanol will likely be trimmed throughout the rest of the marketing-year.

USDA increased old-crop soybean exports in anticipation of some increased purchases from China. South America typically dominates exports in the spring, but production uncertainty and logistical problems may support exports for a few more weeks. Both corn and soybeans are competitively priced in the export market if China wants to fulfill its Phase 1 purchases. Better than projected corn and soybean exports may help offset reductions in domestic use.

Everyone should be expecting corn and soybean planted area to increase in 2020 from 2019 levels. The only real question is the amount of additional planted area. USDA projects corn area at 94 million acres while FAPRI at the University of Missouri projects corn area at 92.9 million acres for an increase of 4.3 and 3.2 million acres, respectively, from 2019. Allendale and Farm Futures surveys peg 2020 corn area at 94.6 and 96.4 million acres, respectively, for a 4.9 and 6.7 million acre increase. Mother Nature will determine planted area; however, the 2020 corn crop could easily exceed 15.3 billion bushels assuming trend yields, which would be 1.6 billion bushels greater than the 2019 corn crop.

Similarly, the USDA and FAPRI project soybean area at 85 and 86.5 million acres, which would be an increase of 8.9 and 10.4 million acres, respectively, from 2019. Allendale and Farm Futures also expect increased soybean area at 83.7 and 82. 7 million acres, respectively, for an increase in the planted area of 7.6 and 6.6 million acres from 2019. The 2020 soybean crop could be 4.1 to 4.2 billion bushels, which would be 540 to 640 million bushels larger than the 2019 crop.

What about demand? The market will continue to focus on ethanol and exports. Ethanol demand will be improved if oil prices increase and if there is increased domestic demand for gasoline. The longer the country is stalled with fear, and consumers are unable to consume, the greater the pain for ethanol.

Similarly, a strong U.S. dollar will be an export headwind once Southern American crops reach the market. A weak global economy may also reduce the demand for feed inputs provided by the U.S. in foreign markets.

In short, the corn and soybean markets are expected to increase ending stocks for the 2020-21 marketing year. The combination of harvested area, harvested yield, and total use will determine the extent of the increase in stocks. Corn tends to have stronger market fundamentals than soybeans. China remains in the driver's seat to determine the soybean market's fate (along with Mother Nature's hand in the size of the crop). Both markets have weaknesses, but corn appears stronger than soybeans at this time.

Is this the end of the world for the grain markets? I do not think that it is the end of the world for old-crop corn and soybeans. USDA reports will drive the market, and USDA tends to be cautious and will (hopefully) not make radical adjustments throughout the spring until the panic subsides.

I expect the new-crop markets to face the punishment of the demand uncertainty. The sooner the country and world can stop self-isolation and return to regular economic activity, the better for grain markets. Ethanol will continue to struggle due to cheap oil, but increased gasoline demand from a robust summer-driving season will improve the ethanol outlook. Processors will still be challenged for profitable margins until the Saudi oil flood stops as the over-supply of oil has depressed unblended gasoline and ethanol prices.

Exports are more complicated to forecast due to exchange rates and trade policies that are shifting supply chains. If the world does not slip into a deep recession, then the U.S. will be a reliable supplier of quality commodities as long as exchange rates are favorable. The longer the world economy is stagnant, the more damage done to demand.

I have not talked at all about wheat. The current futures price for the July 2020 and July 2021 futures contracts are at the top-third for the 2020 contract and almost in the top-third range for the 2021 contract. Wheat futures seasonality suggests that the wheat contract trades in the top-third in June a higher percentage of the days than other months in the marketing year.

The corn and soybean contracts tend to trade in the top-third of each year's trading range in May and June. The market often prices in a risk premium reflecting planting and early crop development concerns. The top-third price is no guarantee of profitability but is often a better price than doing nothing and selling at harvest. Everyone is expecting abundant crops and for stocks to increase. Managers should expect lower prices and tight (or unprofitable) margins. As always, know your costs, develop a marketing plan, and act on these opportunities, as they may not last very long.

Todd Davis
Assistant Extension Professor

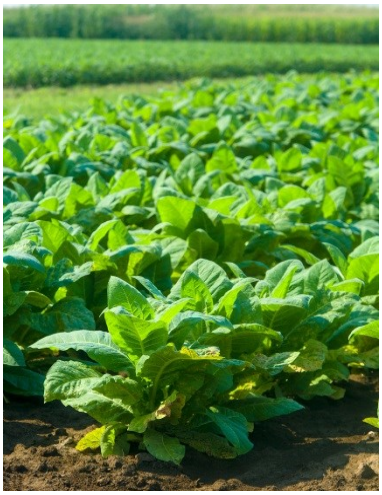
Grain Marketing and Risk Management
Department of Agricultural Economics

Todd.Davis@uky.edu
(270) 365-7541 ext. 243

Tobacco

Will Snell

Kentucky's tobacco sector was in crisis mode in 2020 even before the Coronavirus hit. Declining tobacco product sales, imports, labor challenges, a dismal 2019-2020 marketing season, and long-term uncertainty will most likely contribute to lower tobacco production in 2020. Some reluctant Kentucky tobacco farmers may "stay in the game" just simply due to limited promising alternatives. Tobacco contract volume by company for 2020 appears mixed, with one cigarette company providing modest burley increases, another offering relatively stable contracts, another eliminating growers from certain regions of



Kentucky and the other major buyer reducing contract volume by 25%. While attrition in the number of growers may result in some Kentucky burley farmers actually receiving similar pounds relative to 2020 (depending on company mix), expect total burley acres in the Commonwealth to decline by another 10 to 15%, or more. Dark tobacco acres will likely be off by more than 30% in response to our major dark tobacco buyer reducing contract volume by nearly 50%. To help offset lower burley and dark tobacco acres, it appears that some buyers will ask growers to increase acreage of Connecticut Broadleaf tobacco in 2020. Collectively the value of tobacco production in Kentucky for 2020 may fall below $250 million compared to averaging around $350 million over the past decade.

The impact of the global coronavirus pandemic on U.S. cigarette sales and leaf demand is mixed. Based on previous consumer reactions, cigarette sales tend to increase when consumers are stressed and perceive additional spending availability when the price of gas falls at convenience stores where a large percentage of cigarettes are sold. In addition, many tobacco consumers find themselves at home during the coronavirus outbreak, and thus away from work-related smoking restrictions. However, lower disposable income/job losses will likely induce additional reduction in cigarette sales domestically, with some consumers switching to lower priced tobacco products, which likely contain a very high percentage of less expensive imported leaf. The "income" effect of COVID-19 on tobacco product sales will likely be greater in developing countries where income strapped consumers will most likely limit consumption of cigarettes, especially those with higher-priced U.S. leaf.

Additionally, global monetary policy actions to combat the coronavirus will tend to boost the value of the U.S. dollar, resulting in further erosion of U.S. burley exports and encouraging imported leaf into the U.S. market. Farm group leaders continue to assess legislative or regulatory actions to combat the growing market share of imported leaf, which accounts for over one-half of the burley use by domestic cigarette manufacturers and exceeds the anticipated size of the entire 2020 U.S. burley crop.

Will Snell
Extension Professor
Co-Director, Kentucky Agricultural Leadership Program
Ag Policy, Marketing, and Trade
Will.Snell@uky.edu
(859) 257-7288

Specialty Crops and Local Food Systems

Tim Woods and Brett Wolff

Fruits and vegetable markets nationally have seen demand pressures increase prices as supply chains shift substantially to meet stronger grocery and at-home demand over foodservice. As shown in Table 1, IRI and Nielson data, as reported in the most recent Produce Retailer issue, shows the substantial week-over-week increases in grocery sales for both fruits and vegetables. Keep in mind that these substantial increases are offset by an almost complete shutdown of trade through restaurants and institutions.

Wholesale prices regionally had started above average, as reflected in southern and eastern terminal markets. Tomato prices for early 2020, for example, have moved slightly lower, but remain above the 2016-2019 average for this period. Tomatoes won't be available in Kentucky in significant volume until late May and peaking in July, although growers will be watching these markets carefully as they are planting.

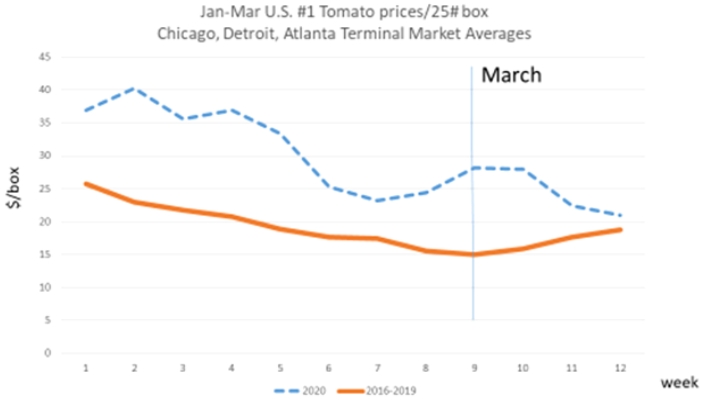


Table 1: Top 10 Fresh Fruits and Vegetables in Weekly Sales

Top 10 in weekly sales	Sales increase for the week ending 3/1/2020	Sales increase for the week ending 3/8/2020	Sales increase for the week ending 3/15/2020	Weekly sales for week ending 3/15/2020
Fresh fruit	-1.7%	+1.5%	+27.3%	$700.4M
Berries	+5.0%	+10.0%	+31.8%	$155.2M
Apples	-5.3%	-3.1%	+36.9%	$108.9M
Bananas	+2.3%	+5.4%	+24.9%	$75.6M
Grapes	-8.9%	-10.1%	+7.2%	$66.7M
Tangerines	-6.2%	-2.9%	+34.6%	$62.0M
Avocados	+3.1%	+6.1%	+27.4%	$54.8M
Oranges	-5.6%	+6.2%	+60.9%	$37.2M
Melons	+1.1%	+1.3%	+10.7%	$31.2M
Lemons	-10.9%	-6.3%	+33.8%	$18.1M
Pineapple	-8.0%	-1.4%	+16.9%	$16.9M
Fresh Vegetables	1.2%	4.7%	40.6%	$838.4M
Lettuce	3.1%	5.2%	29.1%	$189.8M
Potatoes	0.3%	6.4%	71.6%	$105.0M
Tomatoes	9.5%	15.4%	43.2%	$91.5M
Onions	-1.5%	3.1%	59.2%	$64.0M
Peppers	-3.1%	1.5%	37.3%	$53.5M
Carrots	-2.8%	-0.8%	40.6%	$40.3M
Mushrooms	-3.0%	6.4%	35.0%	$29.5M
Broccoli	-2.3%	2.0%	33.5%	$26.5M
Cucumber	5.7%	11.3%	32.4%	$26.0M
Squash	-3.5%	1.3%	43.5%	$22.5M

Source; IRI, Total US, MULO, week ending 3/15/2020

Labor is one of the common concerns cited by growers at this time, a critical resource for most specialty crop growers of even modest scale. Many growers have been finalizing migrant worker documentation. Efforts to allow processing of previously documented workers to become registered without additional interviews has helped this issue. But again, growers that have been seeking new and/or expanded labor support have faced additional challenges.

Local Markets

Historically, over 40% of the produce sales in Kentucky has been marketed through direct to consumer channels. Kentucky has over 160 farm markets, 2700 market vendors, and generates $15-20 million in sales through these channels. Additional markets such as on-farm retail, community supported agriculture, and direct-to-institution sales have seen growth and also play important roles for Kentucky farms. Spring planting is well under way. Most farm markets will begin opening late April, moving toward full operation by mid-May.

At this time, produce markets, including various kinds of wholesale (including auction) and retail markets (including on-farm, CSA, and farm markets), and of course farms are designated as "essential businesses". This also includes nursery and greenhouse production and retail. Sampling restrictions and various strategies to be mindful of appropriate social distance measures are all under consideration.

One of the major challenges in the period of the COVID-19 challenge is the closure and/or substantial sales activity of restaurants, schools and institu-

tions in Kentucky. Kentucky farms have benefitted substantially from demand for their products in these market channels. Growers that have committed early to production for these markets may anticipate some difficulty shifting to other channels. Although early indications nationally suggest that there is a substantial increase in demand for farm markets, CSAs and other channels for local produce.

Longer term (which is highly relative in this environment), concerns about a deep and extended recession and its impact on specialty food items that are more price sensitive are real issues for Kentucky producers, especially with value-added or higher-cost products. Conversely, many local food sources have companion programs to help those in need access these products affordably – SNAP, Double Bucks, WIC, Food Banks. Some adjustments and possible disruption with these programs is likely in the early part of the market season.

UK Extension will be posting updates and resources for local producers on a COVID-19 response website available here. As always, the UK Center for Crop Diversification has a wide variety of educational tools including enterprise budgets, informational publications covering crop selection and market evaluation, and market information including current and historical price reports for farmers markets and produce auctions. All this is available on the website. Follow the CCD on Facebook for updates and on YouTube for production and marketing videos.

Sources:
Ashley Nickle, More retail sales data show significant spike in fresh produce sales, Produce Retailer, accessed online at https://www.produceretailer.com/article, March 25, 2020.

Timothy Woods
Extension Professor

Horticulture Marketing and
Agribusiness Management
Department of Agricultural Economics

Tim.Woods@uky.edu
(859) 257-7270

Brett Wolff
Extension Specialist

Center for Crop Diversification
Department of Agricultural Economics

Brett.Wolff@uky.edu
(859) 323-1913

Interest Rates and Credit Markets

Jonathan Shepherd and Laura Powers

The COVID-19 pandemic has certainly wreaked havoc on our everyday lives and financial markets globally. As the U.S. economy continues to adjust to this reality and process the ever-evolving information associated with this pandemic, we find ourselves in an environment of uncertainty and volatility. Governmental entities at all levels are instituting various policies in an attempt to shore up the current economic situation. One recent policy development that has caught a lot of attention is a move by the Federal Reserve that lowered the effective Federal funds rate from a rate of about 1.5% to 0-0.25%. In layman terms, the Federal funds rate is the interest rate that banks and other depository institutions charge each other to lend money between these institutions. Lowing the federal funds rate is just one tool the Federal Reserve often employs when there is an expectation that the general economy growth rate is going to slow.

It is important to understand that the Federal Reserve does not directly determine market rates for individual lending products. Mortgage rates and other loan rates move independently of the Federal Reserve's actions but typically move in the same direction. For example, if the Federal Reserve lowers the federal fund rate, some lending products interest rates may drop as well. However, the magnitude of the drop and timing of the drop may not match exactly with commercially available loans. Certain lending products are tied more directly Treasury bond yields as opposed to the Federal Reserve funds rate. Albeit, all are interconnected via the overall economy and expectations of growth. Sometime we hear references to prime interest rates. The prime rate is essentially the lowest interest rate at which money can be commercially lent. The prime rate is usually used to index other lending product rates and is tied at least in part to actions taken by but not set by the Federal Reserve.

Anecdotally speaking, many farmers have expressed interest in taking advantage of current conditions to secure the most favorable interest rates. In general, this can be done to simply secure a lower interest rate on a current loan as is. Alternatively, it may be an opportunity to restructure debt, combine loans, or term out unsecured operating debt. However, not every currently held loan will benefit from recent

interest rate movements. Some loans were already at historically low rates depending on their date of origination. The potential savings associated with refinancing will be very individualistic based on the current debt and asset portfolio of any given farmer. The most likely first realized benefit most farmers will receive is a lower interest rate on operating notes assuming they have a variable interest rate.

Refinancing/restructuring debt is not without cost. Farmers must think through any potential interest savings with the cost of obtaining the new or restructured loan. Often times there are various loan fees and in some cases, a new appraisal may be necessary of commercial property. These additional costs can offset some or all of the potential savings.

These are very volatile times in the financial markets. As the effects of the COVID-19 pandemic continues to evolve, the volatility is likely to continue. Each farmer needs to analyze their current financial condition against what the markets are currently offering. It is advised that farmers initiate a conversation with their lenders or potential lenders or other financial professionals to determine their best course of action. This is a very busy time for our lending partners as many farmers are securing operating notes, renewing current lines of credit and now the added rush of potential refinancing opportunities.

Jonathan Shepherd
Extension Specialist

Farm Management
Department of Agricultural Economics

jdshepherd@uky.edu
(859) 218-4395

Laura Powers
Area Extension Specialist

Farm Business Management
Pennyroyal Farm Analysis Group

Laura.Powers@uky.edu
(270) 886-5281

Hemp

Jonathan Shepherd and Tyler Mark

The 2019 hemp growing season started with great optimism, and acreages across the country continued to expand exponentially. However, many of the growing pains that plague infant industries started to show up in 2019. These include but are not limited to regulatory uncertainty, overproduction, and lack of infrastructure development. Kentucky hemp producers are not immune to these growing pains even though we have one of the most developed hemp sectors in the US. Furthermore, it is going to take longer than five years for the infrastructure to develop, conduct basic research needed, and identify the role that hemp will eventually play in our agricultural systems.

In 2019, Kentucky approved 60,000 acres for hemp production with a realized harvested acreage of 24,900. Essential oil production, in this case, floral production for CBD, accounted for 92% of these acres. It is expected that the interest in hemp production for CBD will wane for the 2020 production season as producers faced a host of challenges in the 2019 growing season. The 2019 growing season saw an increase in the percentage of samples exceeding the allowable THC level of 0.3% to 43% of samples, a 76% price decrease from July 2019 ($4.35/%CBD) to November 2019 ($1.03/%CBD), pest and disease pressures, contract defaults, lawsuits, and bankruptcies.

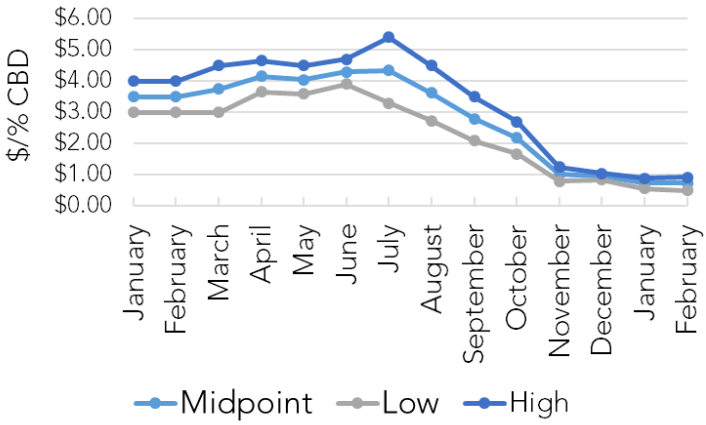


Figure 1: Kentucky Biomass Pricing January 2019-February 2020 (source: PanXchange)

Engaging in production agriculture is a risky profession, even for mature markets, such as corn and poultry, much less one that lacks the market transparency of hemp. One way producers mitigate risk in mature markets is through the utilization of production and marketing contracts. Unfortunately, many hemp producers find themselves with a contract that is not enforceable because of the financial condition of the company and changes within the hemp market. The objective is not to defend pro-

ducers or processors but to articulate the uncertainty of the landscape they face. Both are still on the frontier of an emerging market. Funding mechanisms for processors are largely dependent on venture capital that can quickly flow into and out of a company, thus complicating the cash flow and financing of processors. Plus, many of these venture capitalists in the emerging hemp industry had limited understanding of agriculture and working with farmers. The fallout of this is that multiple hemp processors have ceased operation, filed bankruptcy, lost investors, or all of the above and producers are holding a crop that has dropped significantly in value. This situation is not isolated to Kentucky but happening nationwide. It is recommended that any party seek legal counsel before signing any contract or marketing agreement. Next month's *Economic and Policy Update* newsletter will feature an article highlighting contract considerations for hemp producers.

On a more positive note, new risk management tools for hemp producers are starting to become available. Private insurance has been available for several years and continues to be an option. For the 2020 growing season, hemp producers can insure hemp under a Whole-Farm Revenue Protection Policy (WFRP), Non-insured Crop Disaster Assistance Program (NAP), or the Actual Production History (APH) Pilot Program. APH is available in select counties for 21 states[1]. Kentucky happens to be one of the states with 95 of the 120 counties included in this product. This product is a multiple peril crop insurance product that can be purchased to cover grain, fiber and floral production methods. Growers must have a contract with a processor, and it does not cover crops that test over legal limits for THC concentration. Our recommendation is that you speak with your local RMA insurance provider for more detail and eligibility.

On October 31, 2019, the United States Department of Agriculture (USDA) released the Interim Final Rules governing hemp production[2]. The rules provided a mixture of clarification and uncertainty for the industry. After an active comment period on the regulations that garnered over 4,600 comments, a lot of work remains to be done to provide producers, processors and investors the clarity needed to make investments into this industry. The Kentucky Department of Agriculture ultimately decided that our state will continue under the 2014 Pilot Program for 2020. This program will officially end on October 31, 2020, and it is unknown if this deadline will be extended, so stay tuned. Effectively this allows Kentucky to continue business as usual for the 2020 hemp crop. One thing of note is that if this date is not extended, then any hemp harvested after October 31, 2020, will fall under the regulations set forth by the Interim Final Rule.

Another positive is that our hemp grower budgets, available at https://hemp.ca.uky.edu/, continue to show positive returns, but significantly lower than the 2019 budgets due primarily to lower anticipated prices. We always recommend that individual growers use their own numbers that better represent their own unique operation. While the hemp sector is still in its infancy, it is essential to note that production practices continue to vary between producers and processors. We have updated our hemp enterprise budgets to include fixed costs. These are best estimates for the "average" hemp producers, and extreme caution should be used in using the information contained in these budgets at face value. Further, any potential profit is a moot point if the contract that you sign is unenforceable. Please remember that more states and tribal lands will be eligible to produce hemp in 2020 which could lead to additional overproduction pressures.

Sensitivity tables have been included in our enterprise budgets, and they may be a helpful tool when evaluating these possibilities in your operation. Here are some questions to consider; How much risk are you willing to bear? How much risk can you

[1] https://www.rma.usda.gov/en/Fact-Sheets/National-Fact-Sheets/Actual-Production-History-Hemp-Policy

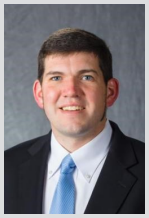
[2] https://www.federalregister.gov/documents/2019/10/31/2019-23749/establishment-of-a-domestic-hemp-production-program

bear? If you end up with a crop you cannot sell, can you survive financially? Even with crop insurance options, it is crucial to think through what financial risk you are assuming if you cannot sell your crop, or if you have to store your crop for an extended period to find a buyer. You also need to be mindful of the fact that best hemp storage practices are not known nor are potential quality degradation issues know with storage.

Hemp for fiber and grain production is still of interest but still facing many of the same struggles as the essential oil sector. Kentucky farmers would be interested in producing hemp for fiber and grain, assuming the economics of such justified moving acreages away from other enterprises. However, there currently is minimal fiber and grain processing capacity in Kentucky. With the changing market place for essential oils and decreased profitability potential, these two sectors could get more focus, and have the potential to be included in our crop rotations. The University of Kentucky has recently received funding to investigate this topic. As research results are available, they will be uploaded onto the University of Kentucky Industrial Hemp webpage (https://hemp.ca.uky.edu/).

All of the other complicating factors are still present in the hemp space. We are still struggling with understanding genetics, having reliable sources for genetics, and ultimately having access to certified seed that delivers an end product consistent with the claims made by some seed companies. THC content is still an issue for some producers. While this industry is evolving with valuable lessons learned over the past five years, the industry still needs more scientific research and market stability. All of this will only come with time.

In 2020, we look for USDA to continue to provide guidance on the Interim Final Rule making process and changes to the process that will be implemented for 2020 and beyond. FDA is also continuing to provide guidance as it advances its work related to Cannabidiol products. However, it is expected that progress on these fronts will be slowed as these agencies and Congress continue to deal with the COVID-19 pandemic. At this point, it is unknown what impact COVID-19 will have on the hemp market in 2020. However, with the amount of biomass for processing in storage and additional states coming into production in 2020 it is expected pricing will continue to be depressed. At the retail level, pricing for CBD could potentially soften as processors work through the biomass stocks. As for the grain and fiber markets there is potential for these markets to continue to develop as the supply chains for these industries continue to mature.



Jonathan Shepherd
Extension Specialist

Farm Management
Department of Agricultural Economics

jdshepherd@uky.edu
(859) 218-4395

Tyler Mark
Assistant Professor

Production Economics, Farm Management, Digital Agriculture, and Hemp Economics
Department of Agricultural Economics

Tyler.Mark@uky.edu
(859) 257-7283

College of Agriculture, Food and Environment

Agricultural Economics

Edited by:

William Snell

315 Charles E. Barnhart Building

Lexington, KY 40546-0276

Phone: (859) 257-7288

Fax: (859) 257-7290

Nicole Atherton

401 Charles E. Barnhart Building

Lexington, KY 40546-0276

Phone: (859) 257-3266

Fax: (859) 323-1913

Economic and Policy Update

View all issues online and subscribe to this newsletter at

http://agecon.ca.uky.edu/econ-policy-updates

Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin. UNIVERSITY OF KENTUCKY, KENTUCKY STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE & KENTUCKY COUNTIES COOPERATING