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COVID-19 Impacts on Arkansas' Agricultural and Rural Economies

September 2020

John D. Anderson, Editor

Foreword

In response to the COVID-19 pandemic in 2020 and the unprecedented economic disruptions that it caused, faculty in the Agricultural Economics & Agribusiness Department (AEAB) at the University of Arkansas (UA) produced a series of regular economic updates for distribution by the UA Division of Agriculture, Cooperative Extension Service. These updates were originally posted to a COVID-19 resources page on the UA Division of Agriculture website (https://www.uaex.edu/life-skills-wellness/health/covid19/COVID-Economic_Impacts_in_Arkansas.aspx).

In order to preserve the information in these publications as well as to provide an easily referenced format for future research, outreach, and educational purposes, these publications are being reproduced as a series of AEAB Staff Papers. The table of contents on the following page individually lists each article compiled in this volume along with its original date of posting. The articles in this volume were all produced in the month of September 2020.

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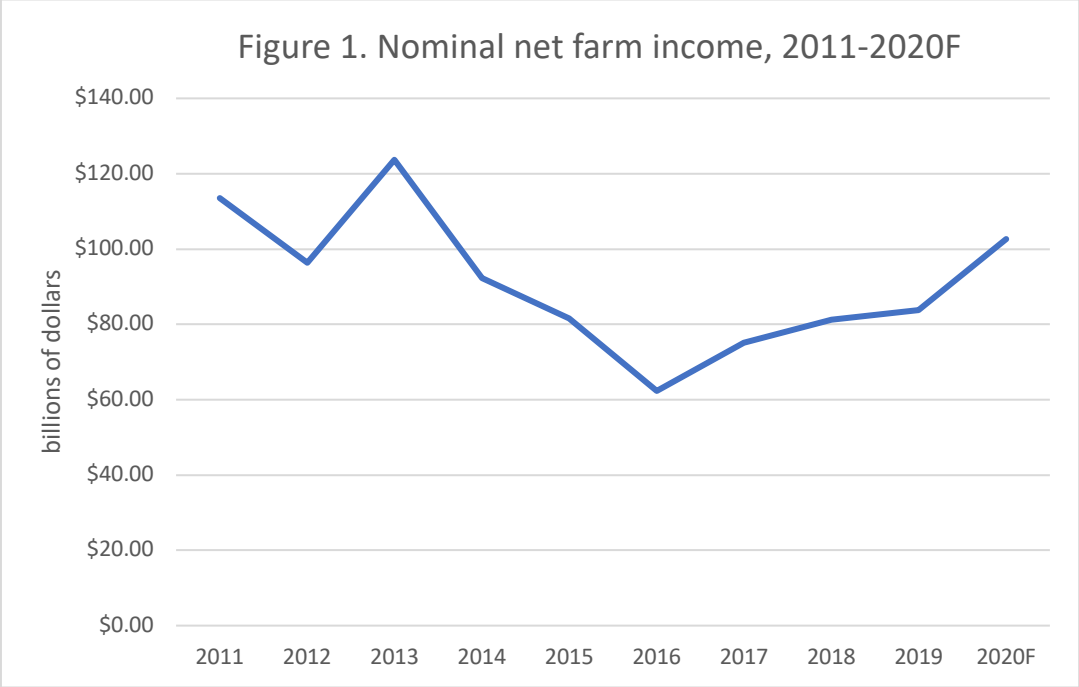
2020 Net Farm Income

James Mitchell

September 4, 2020

On September 2, USDA's Economic Research Service (ERS) published their latest forecasts for 2020 U.S. net farm income. ERS publishes their farm income and financial forecasts in February, August, and December of each year. This year's estimates are particularly important as the farm economy continues to work through COVID, the derecho storm that impacted parts of Iowa, and Hurricane Laura.

ERS forecasts U.S. net farm income at $102.7 billion in 2020, a 23% increase over 2019 net farm income of $83.7 billion (Figure 1). For comparison, the 2018-2019 year-over-year increase in net farm income was 3%. The average net farm income for 2011-2020F is $91.3 billion, and this year's forecast would be the first year since 2014 that net farm income is above the historical average.



Source: USDA ERS 2020
Note: 2020F is forecasted as of September 2, 2020

ERS forecasts 2020 cash receipts at $358.3 billion, down 3.3% from 2019. Livestock and livestock products are forecasted to be down 8.1% in 2020, while crop cash receipts are predicted to be up 1% from 2019 (Tables 1 and 2). The largest decline in livestock cash receipts is broilers, forecasted to be down 23.4% from 2019. Hogs are forecasted to be down 15.9%, and cattle and calves are forecasted down 7.7% from 2019. The fruits and nuts sector is forecasted to have the highest year

over year increase in cash receipts (17.05%). Rice and wheat cash receipts for 2020 are forecasted down 6.3% and 6.5% receipts. Corn cash receipts are forecasted to decrease by $3.11 billion.

Table 1. Livestock and livestock product cash receipts

	2019	2020	Percent change
Animals and products	175.99	161.69	-8.13%
Meat animals	88.25	79.68	-9.71%
Cattle and calves	66.24	61.16	-7.67%
Hogs	22.02	18.52	-15.87%
Dairy products, Milk	40.50	39.61	-2.20%
Poultry and eggs	40.36	35.47	-12.13%
Broilers	28.31	21.70	-23.37%
Miscellaneous animals and products	6.88	6.93	0.75%

Source: USDA ERS 2020
Note: 2020F is forecasted as of September 2, 2020

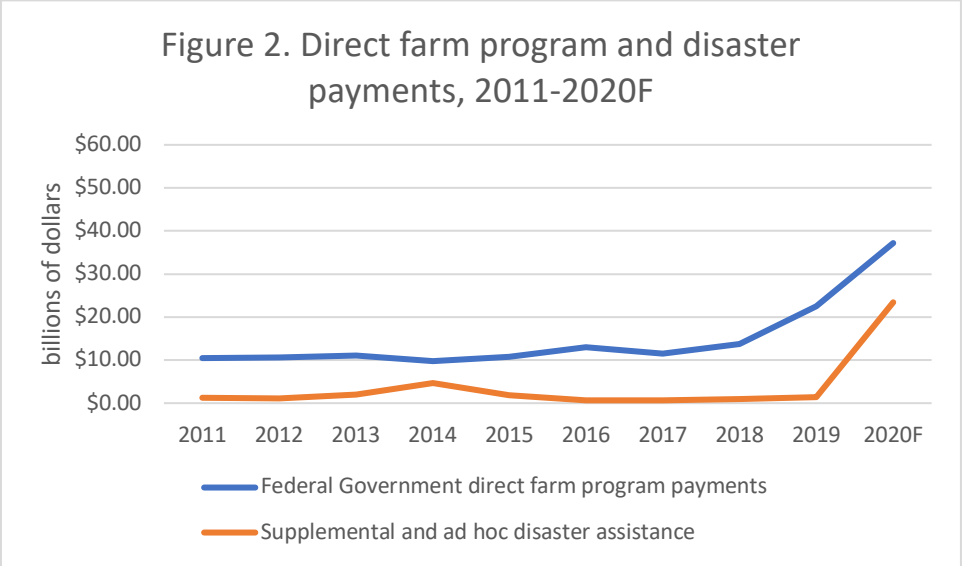
Table 2. Crop cash receipts

	2019	2020F	Percent Change
Crops	194.64	196.61	1.01%
Food grains	11.79	11.01	-6.66%
Rice	2.75	2.58	-6.31%
Wheat	8.95	8.37	-6.54%
Feed crops	59.69	57.03	-4.47%
Corn	50.10	46.99	-6.20%
Cotton	7.11	6.59	-7.35%
Tobacco	1.00	0.83	-17.50%
Oil crops	36.32	36.09	-0.63%
Vegetables and melons	18.98	19.42	2.32%
Fruits and nuts	28.72	33.62	17.05%
All other crops	31.01	32.02	3.26%

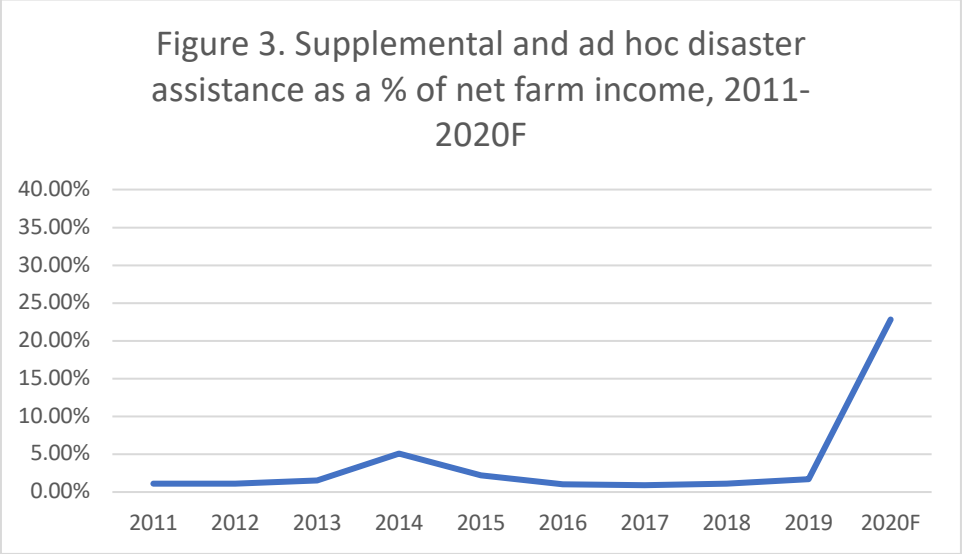
Source: USDA ERS 2020
Note: 2020F is forecasted as of September 2, 2020

One driver behind this year's forecasted increase in net farm income is the increase in direct government farm payments (Figure 2). USDA forecasts 2020 direct farm payments at $37.2 billion, a 65.7% increase over 2019 direct farm payments. These direct government payments for 2020 will account for 36.2% of net farm income. In 2019, direct payments accounted for 26.8% of net farm income. Most of the increase in direct farm payments is from the increase in supplemental and ad hoc disaster payments for COVID relief. ERS forecasts 2020 supplemental and ad hoc disaster payments at $23.4 billion. These disaster payments represent 63.0% of forecasted total government direct payments. Figure 1 shows that disaster payments are at their highest since 2014, when disaster payments were $4.7 billion, which accounted for 48.4% of direct government

payments. Although supplemental and ad hoc disaster payments were relatively high in 2014, they only accounted for 5.1% of net farm income compared to 2020, where disaster payments account for 22.82% of net farm income (Figure 3).



Source: USDA ERS 2020
Note: 2020F is forecasted as of September 2, 2020



Source: USDA ERS 2020
Note: 2020F is forecasted as of September 2, 2020

Coronavirus Food Assistance Program Payments in Arkansas

Scott Stiles, Brad Watkins, C. Robert Stark, Jr., Alvaro Durand-Morat

September 15, 2020

Over $136 million in direct payments have been approved for Arkansas farmers and ranchers through the Coronavirus Food Assistance Program (CFAP) as of Monday, September 13th according to USDA reporting.

Table 1 provides details of the 18,163 applications that have been made through September 13th , with $136,552,000 in payments approved. Payments to livestock producers account for over 69 percent of the approved CFAP payments for Arkansas. Non-specialty crops account for almost 27 percent of the state total. Non-specialty crops eligible for CFAP payments include malting barley, canola, corn, upland cotton, millet, oats, soybeans, sorghum, sunflowers, durum wheat, and hard red spring wheat. Rice and soft red winter wheat were excluded from the CFAP program. The remaining 3 percent of CFAP payments is split among Specialty crops (2.3 percent), Dairy (0.7 percent) and the blended category of Aqua-Nursery-Flora (0.6 percent).

Table 1. Coronavirus Food Assistance Program Payments, Arkansas (as of Sept. 13, 2020)

	Payments	Payments (% of Total)	Applications
Livestock	$94,887,191	69.5 percent	14,252
Non-specialty	$36,613,585	26.8 percent	4,014
Specialty	$3,181,520	2.3 percent	63
Dairy	$1,014,595	0.7 percent	40
Aqua Nursery Flora	$855,109	0.6 percent	20
Total	**$136,552,000**		**18,163**

Source: USDA, Farm Service Agency.

With livestock and non-specialty crops accounting for just over 96% of the state's total CFAP payments, Tables 2 and 3 provide some additional detail in regard to specific commodity payments. As shown in Table 2, cattle accounts for the overwhelming majority of livestock CFAP payments with a cumulative total to date of over $92 million or roughly 97% of the total livestock payments.

Table 2. Livestock CFAP Payments, Arkansas (as of Sept. 13, 2020)

Commodity	CFAP Payments	Percent of Total
Cattle	$92,142,203	97.1%
Hogs	$2,384,548	2.5%
Lambs-Lambs-<2YRS	$305,359	0.3%
Sheep-Sheep->2YRS	$55,081	0.1%
TOTAL	**$94,887,191**	

As mentioned, non-specialty crops account for almost 27 percent of the state's total CFAP payments. Among the eligible commodities, upland cotton, corn, soybeans and grain sorghum account for all of the non-specialty crop payments received in Arkansas. Cotton payments make up approximately 53% of total payments, while corn and soybeans make up 24.7% and 22.4% respectively.

Table 3. Non-Specialty CFAP Payments, Arkansas (as of Sept. 13, 2020)

Commodity	CFAP Payments	Percent of Total
Cotton-Upland	$19,382,721	52.9%
Corn	$9,030,071	24.7%
Soybeans	$8,186,816	22.4%
Sorghum	$13,502	0.04%
TOTAL	**$36,613,585**	

Table 4. below provides a comparison of cumulative CFAP payments to U.S and Arkansas producers. USDA Farm Service Agency (FSA) has already approved over $9.9 billion in payments to U.S. producers who have applied for the program. FSA began taking applications May 26, and the agency has received 621,919 applications for this program. Arkansas' share of CFAP payments is relatively small at 1.4 percent of the total.

Table 4. Coronavirus Food Assistance Program Payments, U.S. and Arkansas (as of Sept. 13, 2020).

Commodity	U.S. Payments ($)	Arkansas Payments ($)	Arkansas % of U.S. Total	Arkansas Ranking
Livestock	$4,872,174,302	$94,887,191	1.9%	15
Non-specialty	$2,584,080,982	$36,613,585	1.4%	17
Specialty	$647,035,786	$3,181,520	0.5%	22
Dairy	$1,736,703,648	$1,014,595	0.1%	46
Aqua Nursery	$81,612,764	$855,109	1.0%	11
Total	**$9,921,607,482**	**$136,552,000**	1.4%	**23**

Source: USDA, Farm Service Agency.

USDA recently expanded eligibility of CFAP direct assistance to 41 more specialty crops, in addition to the 42 added in July, and has added sheep, frozen and liquid eggs, aquaculture, nursery crops and cut flowers. Sweet potatoes and pecans account for nearly all (99.6% or $3,167,838) of Arkansas' specialty crop payments.

Producers of certain aquaculture are also eligible for CFAP assistance. Commodities under this category include: catfish, crawfish, largemouth bass and carp sold live as foodfish, hybrid striped bass, red drum, salmon, sturgeon, tilapia, trout, ornamental/tropical fish, and recreational sportfish. Catfish accounts for 83% or $713,291 of Arkansas' Aqua-Nursery-Flora payments.

In addition, producers of nursery crops and cut flowers have been extended eligibility for CFAP. Nursery crops are considered decorative or non-decorative plants grown in a container or controlled environment for commercial sale. Cut flowers includes cut flowers and cut greenery from annual and perennial flowering plants grown in a container or controlled environment for commercial sale.

Created through the Coronavirus Assistance, Relief and Economic Security Act (CARES) and coordinated by the USDA Farm Service Agency, CFAP direct payments were designed to provide relief to eligible farmers and ranchers facing financial losses due to the impacts of the COVID-19 pandemic. Through CFAP, USDA made available $16 billion in financial assistance to farmers.

The application period for CFAP ended on September 11 for producers in Arkansas. FSA has extended the deadline to October 9, 2020, for certain producers in Louisiana and Texas impacted by Hurricane Laura. More information on the CFAP program and the application process may be found at farmers.gov/cfap.

While Congress has yet to finalize the details of another coronavirus relief package, USDA is expected to announce details of a second CFAP aid program this month. Congress has approved $14 billion dollars in Commodity Credit Corporation funds on top of $16 billion allocated for the first Coronavirus Food Assistance Program which made direct payments based on producer losses in the first quarter of 2020.

USDA officials indicate the second version of the CFAP program will be more inclusive for commodities that weren't eligible for the first program. The second version is expected to cover COVID-19 losses from the 2020 growing season and others, like losses in the cattle industry, which were not addressed in the first program.

Beef Price Spreads

James Mitchell

September 18, 2020

On September 11, USDA's Economic Research Service (ERS) published their latest data on monthly meat price spreads for beef, pork, and poultry and eggs. For beef, price spreads include farm-wholesale, farm-retail, and wholesale-retail. This report focuses on the farm-wholesale beef price spread as it has received considerable attention recently.

The farm-wholesale beef spread is calculated using USDA's Agricultural Marketing Service prices and is comprised of wholesale and farm beef values. At first glance, an obvious challenge with a farm-wholesale price spread for beef is that values must represent the same product as it moves through the beef supply chain. To do this, USDA ERS calculates farm and wholesale values that are based on a "standard animal." The standard animal is the 5-Area weighted average price of a 35-65% choice live FOB steer. The gross farm value is obtained by converting the 5-Area steer price into cents per pound on a retail-weight basis using a conversion factor of 2.14, and the net farm value is gross farm value less byproduct allowance. The wholesale value is the average price of beef that leaves packing plants, on a retail-weight basis. The farm-wholesale beef price spread is wholesale value less net farm value. Complete documentation of ERS methodology for price spreads is found at https://www.ers.usda.gov/data-products/meat-price-spreads/documentation/.

The beef price spread represents the difference in the value of a choice steer at the farm and wholesale levels in comparable units. Many use the farm-wholesale beef price spread as a measure of the farm-to-wholesale marketing margin. However, there are essential and sometimes overlooked differences between price spreads and margins. A marketing margin is broadly defined as the cost of transforming a product. In this case, the marketing costs from transforming a live steer into wholesale beef cuts.

The USDA ERS farm-wholesale beef price spread is perhaps the most widely used data series for monitoring adjustments to wholesale gross margins. While the farm-wholesale price spread represents the difference in a product's value, it does not reflect a packer's gross margin (Hahn, Angadjivand, Sewadeh, and Edwards 2015). A gross margin is a difference between a product's selling and purchase price. There is significant variation in these selling and purchase prices across time, firms, and animals. At best, the farm-wholesale beef price spread is the average gross margin (Hahn 2005).

Figure 1 plots the farm-wholesale beef price spread for the September 2018-August 2020 period. The spread reached a record high of 389.5 cents per retail pound in May 2020. For comparison, the May 2019 price spread was 82.5 cents per retail pound. More recently, it appears that the price spread has started to return to relatively more normal levels. The August 2020 farm-wholesale beef price spread is 99.2 cents per retail pound, a 1.85% increase over July 2020. A common criticism is that cattle and meat prices did not have the same reaction to the many COVID-19 related disruptions. Specifically, wholesale meat prices reached record highs while cattle prices were in decline.

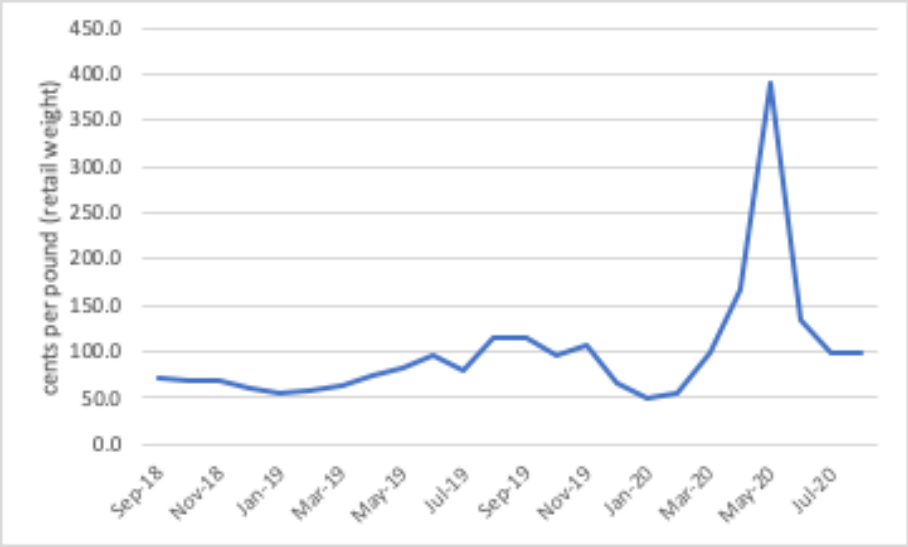


Figure 1. Farm-Wholesale Beef Price Spread, September 2018-August 2020
Source: USDA ERS

Figure 2 breaks out the farm-wholesale beef price spread into the wholesale and net farm values. COVID-19 introduced several shocks into U.S. meat supply chains. A discussion of COVID-19 related disruptions to meat supply chains are documented in "April 17, 2020-Impacts of Beef, Pork, and Broiler Production" and "May 4, 2020-Impacts on wholesale meat prices" both of which are available at https://www.uaex.edu/life-skills-wellness/health/covid19/COVID-Economic_Impacts_in_Arkansas.aspx. In aggregate, Figure 2 suggests that most of the runup in the farm-wholesale beef price spread can be attributed to the increase in wholesale prices rather than a decline in cattle prices. That is not to say that COVID-19 did not put downward pressure on cattle prices. It did.

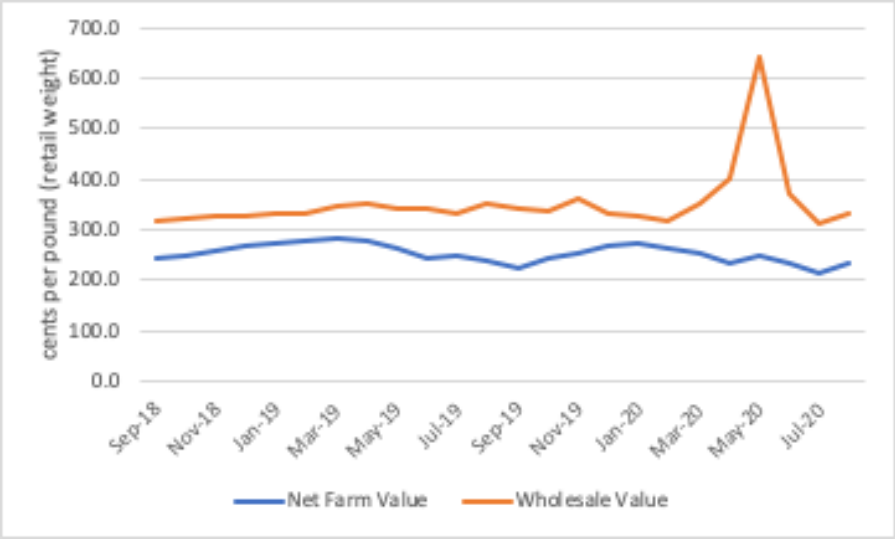


Figure 2. Net Farm Value and Wholesale Value
Source: USDA ERS

From February 2020 to May 2020, wholesale value increased by 101% (Figure 2). At the same time, net farm values declined 5% (Figure 2). From May 2020 to August 2020, wholesale and net farm

values have fallen 48% and 7%. However, net farm values have experienced an increase from July 2020. Much of the observed adjustment of wholesale marketing margins results from the second significant COVID-19 disruption to the beef supply chain—several processing facilities' shutdown.

Processing plants began to close as clusters of COVID-19 outbreaks started impacting facility workers' health and safety. The effects of processing plant closures on wholesale beef prices were two-fold. First, plant closures resulted in reduced processing capacity and tighter beef supplies. Second, bringing processing plants back online presented safety and logistical challenges regarding meeting CDC and OSHA guidelines. From March 2020 to May 2020, choice boxed beef cutout values increased by 84% (Figure 3). Processing plant closures also had a demand-side effect. The reduced processing capacity resulted in a bottleneck as fewer plants were able to take cattle. Those that were processing were likely doing so at reduced capacity. This shift in demand for fed cattle put downward pressure on fed cattle prices. From March 2020 to May 2020, the 5-Area live steer price declined 4.3% (Figure 3). Both wholesale beef prices and fed cattle prices have started to return to pre-COVID-19 levels.

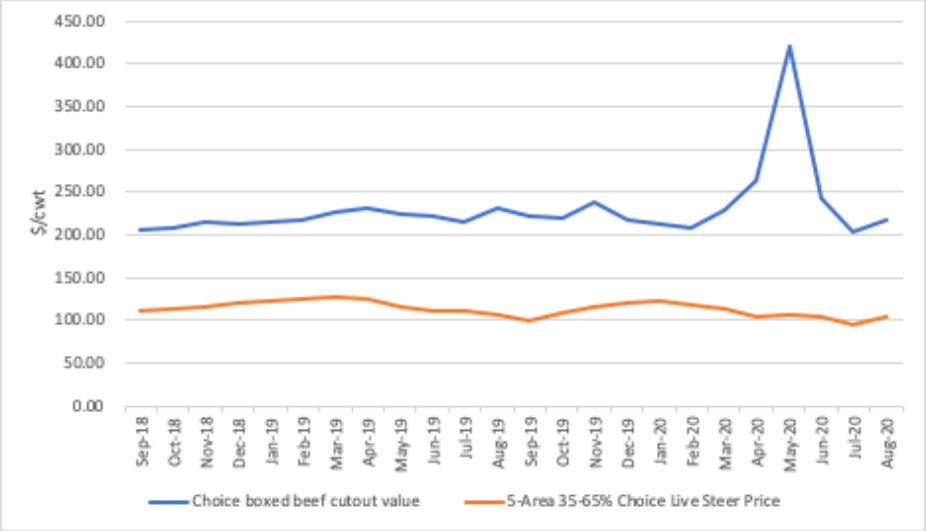


Figure 3. Choice Boxed Beef Cutout and 5-Area Live Steer Price
Source: LMIC

Many of the COVID-19 related disruptions have had a pronounced effect on cattle and meat prices. As we move into the fall, overall economic uncertainty and consumer demand will be important factors. The next cattle on feed report that is scheduled for release on September 25 will offer another piece of information on how much progress has been made on working through the backlog of cattle that resulted from plant closures.

References

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Coronavirus Food Assistance Program Payments in Arkansas

Scott Stiles, Brad Watkins, C. Robert Stark, Jr., Alvaro Durand-Morat

September 20, 2020

The contents of this report summarize the cumulative payments from the Coronavirus Food Assistance Program announced on April 17, 2020. The deadline for most producers to apply for what is now referred to as CFAP 1 was September 11. Certain producers in Louisiana, Oregon, and Texas have through October 9 to apply.

Over $138 million in direct payments have been approved for Arkansas farmers and ranchers through the Coronavirus Food Assistance Program (CFAP1) as of September 20th according to USDA reporting.

Table 1 provides details of the 18,446 applications that have been made through September 20th, with $138,509,569 in payments approved. Payments to livestock producers account for 69 percent of the approved CFAP1 payments for Arkansas. Non-specialty crops account for almost 27 percent of the state total. Non-specialty crops eligible for CFAP1 payments include malting barley, canola, corn, upland cotton, millet, oats, soybeans, sorghum, sunflowers, durum wheat, and hard red spring wheat. Rice and soft red winter wheat were excluded from the CFAP1 program. The remaining 3 percent of CFAP1 payments is split among Specialty crops (2.6 percent), Dairy (.7 percent) and the blended category of Aqua-Nursery-Flora (.8 percent). Sweet potatoes and pecans account for nearly all (99% or $3,524,323) of Arkansas' specialty crop payments. Catfish accounts for 65% or $753,330 of Arkansas' Aqua-Nursery-Flora payments.

Table 1. Coronavirus Food Assistance Program Payments, Arkansas (as of Sept. 20, 2020).

	Payments	Percent of Total	Applications
Livestock	$95,561,176	69.0%	14,428
Non-specialty	$37,221,374	26.9%	4,110
Specialty	$3,561,427	2.6%	66
Dairy	$1,014,595	0.7%	40
Aqua Nursery Flora	$1,150,997	0.8%	23
Total	**$138,509,569**		**18,446**

Source: USDA, Farm Service Agency.

With livestock and non-specialty crops accounting for just almost 96% of the state's total CFAP1 payments, Tables 2 and 3 provide some additional detail in regard to specific commodity payments. As shown in Table 2, cattle accounts for the overwhelming majority of livestock CFAP1 payments with a cumulative total to date of $92.8 million or roughly 97% of the total livestock payments.

Table 2. Livestock CFAP1 Payments, Arkansas (as of Sept. 20, 2020).

Commodity	Payments	Percent of Total
Cattle	$92,800,441	97.1%
Hogs	$2,398,493	2.5%
Lambs <2YRS	$306,349	0.3%
Sheep >2YRS	$55,893	0.06%
TOTAL	**$95,561,176**	

Source: USDA, Farm Service Agency.

Non-specialty crops account for almost 27 percent of the state's total CFAP1 payments. Among the eligible commodities, upland cotton, corn, soybeans and grain sorghum account for practically all of the non-specialty crop payments received in Arkansas. Cotton payments make up approximately 53% of total payments, while corn and soybeans make up 24.9% and 22.5% respectively.

Table 3. Non-Specialty CFAP1 Payments, Arkansas (as of Sept. 20, 2020).

Commodity	CFAP1 Payments	Percent of Total
Cotton-Upland	$19,551,155	52.5%
Corn	$9,284,048	24.9%
Soybeans	$8,367,171	22.5%
Sorghum	$18,526	0.05%
TOTAL	**$37,221,374**	

Source: USDA, Farm Service Agency.

Table 4 below provides a comparison of cumulative CFAP1 payments to U.S. and Arkansas producers. USDA Farm Service Agency (FSA) has already approved over $10.1 billion in payments to U.S. producers who have applied for the program. FSA began taking applications May 26, and the agency has received 638,476 applications for this program. Arkansas' share of CFAP1 payments is relatively small at 1.4 percent of the total.

Table 4. CFAP 1 Payments, U.S. and Arkansas (as of Sept. 20, 2020).

Commodity	U.S. Payments ($)	Arkansas Payments ($)	Arkansas % of U.S. Total	Arkansas Ranking
Livestock	$4,943,253,437	$95,561,176	1.9%	15
Non-specialty	$2,621,448,117	$37,221,374	1.4%	17
Specialty	$702,457,145	$3,561,427	0.5%	22
Dairy	$1,748,250,578	$1,014,595	0.1%	46
Aqua Nursery	$97,060,457	$1,150,997	1.0%	10
Total	**$10,112,469,734**	**$138,509,569**	1.4%	**23**

Source: USDA, Farm Service Agency.

USDA recently announced the implementation of Coronavirus Food Assistance Program 2 for agricultural producers. President Trump and Secretary of Agriculture Perdue announced on September 17 that USDA will implement an expansion of the Coronavirus Food Assistance Program. Of particular interest to Arkansas row crop producers would be the added program eligibility of rice, soft red winter wheat and peanuts. The application period for Coronavirus Food Assistance Program 2, or CFAP 2, runs from September 21 through December 11, 2020. More information on CFAP 2 can be found at https://www.farmers.gov/cfap