Agricultural and Food Policy Center
Texas A&M University

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Overview of Trade Aid and Its Impact on AFPC's Representative Farms

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Briefing Paper 20-2

Cover photo courtesy USDA.

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Executive Summary

Shortly after taking office, President Trump launched investigations into the national security ramifications of steel and aluminum imports from a variety of countries and into the handling of intellectual property rights protection and enforcement by China. Both of these investigations resulted in tariffs being placed on imports from the implicated countries, including China. In response, these countries imposed their own retaliatory tariffs, with China ultimately imposing tariffs on more than 1,000 U.S. agricultural tariff lines.

The U.S. farm economy was already going into the fifth year of recession when retaliatory tariffs were imposed by China and others. The Administration responded by authorizing trade aid packages for both the 2018 and 2019 crop years that included commodity purchases, trade promotion, and direct assistance to producers to help defray the costs of disrupted marketing. There is no denying that the aid package—particularly the Market Facilitation Program (MFP)— has had a significant impact on farm income in the United States. Across all of the Agricultural & Food Policy Center's (AFPC) 63 representative crop farms, MFP 1.0 (2018) and 2.0 (2019) protected $16.4 million in net worth over the 2018-2020 study period. Furthermore, under baseline conditions (i.e. no MFP), 35 of the 63 farms had a greater than 50% probability of negative ending cash at the end of 2020 (i.e. needing to borrow on operating notes to finance shortfalls). With MFP in place, that number was cut by 34.3% (23 farms facing significant threat of shortfall).

Some have argued that MFP 2.0 was biased toward Southern states. While there was significant variability in county payment rates for MFP 2.0, most of that variability is easily explained by the underlying damage assessments and the distribution of planted acres in the respective counties. And, despite the fact that the highest county payment rates were predominantly in counties with cotton production, almost 70 percent of the assistance under MFP 2.0 went to Midwestern states. While we find little validity to the argument of regional inequity, there certainly were disparities between neighboring counties. These diferences were particularly disruptive for producers of crops relatively more impacted by retaliatory tariffs who happened to produce in counties with lower payment rates.

Finally, we find that MFP 1.0 and 2.0 have also had a greater than $41 billion impact on the broader rural economy.

Introduction

In April 2017, the U.S. Department of Commerce initiated investigations into steel and aluminum imports under Section 232 of the Trade Expansion Act of 1962. The Commerce Department found that steel and aluminum imports threatened to impair national security, and on March 23, 2018, President Trump announced that he concurred with the findings from the investigation and imposed tariffs on certain steel and aluminum imports from a number of different countries.

In August 2017, the Office of the U.S. Trade Representative (USTR) launched an investigation into China's handling of intellectual property rights protection and enforcement. USTR found that China's practices were unreasonable and burdened U.S. commerce. In response, on July 6, 2018, President Trump imposed an initial series of 25% tariffs on $34 billion in imports from China. Since then, the United States has gone through four implemented/proposed tariff hikes under Section 301.

In response to these actions, several countries imposed retaliatory tariffs—in many cases targeting agricultural products. While the retaliatory tariffs imposed by Canada and Mexico in response to the Section 232 investigation were lifted effective May 20, 2019, by the fall of 2019, China had retaliatory tariffs in place on over 1,000 U.S. agricultural tariff lines.

With the retaliatory tariffs adding to an already precarious farm economy, on two separate occasions—for both the 2018 and 2019 crop years—President Trump stepped in to provide assistance for agricultural producers who were being negatively impacted by the trade dispute. While assistance also came in the form of commodity purchases and trade promotion, the vast majority was provided as direct assistance to producers via the Market Facilitation Program (MFP).

This report provides an overview of the history of MFP, examines the regional distribution of support, analyzes the impact of MFP on AFPC's representative farms, and estimates the economic impact on the broader rural economy. The analysis is focused primarily on the non-specialty crops that were eligible for MFP, but select specialty crops and animal products were also eligible.

Market Facilitation Program (MFP) Background

MFP 1.0 (2018)

On July 24, 2018, the U.S. Department of Agriculture (USDA) announced that up to $12 billion in aid would be made available to producers, with almost $10 billion being provided through MFP for the 2018 crop year. According to USDA (2018a), the assistance was "in response to trade damage from unjustified retaliation by foreign nations."

To determine the assistance levels provided to producers, USDA estimated gross trade damages caused by the retaliatory tariffs imposed by several countries in response to the Section 232 and 301 investigations. While we now have the luxury of hindsight, those damage levels were determined before trade data was available (or before lower trade levels could be observed). USDA utilized standard estimation methods to determine dam-

Table 1. Comparing 2018 and 2019 Gross Trade Damage Rates by Crop.

Non-specialty crops	MFP 1.0	MFP 2.0	Units
Alfalfa Hay		$2.81	TONS
Chickpeas		$1.48	CWT
Corn	$0.01	$0.14	BU
Cotton	$0.06	$0.26	LB
Dried Beans		$8.22	CWT
Lentils		$3.99	CWT
Peanuts		$0.01	LB
Peas		$0.85	CWT
Rice		$0.63	CWT
Sorghum	$0.86	$1.69	BU
Soybeans	$1.65	$2.05	BU
Wheat	$0.14	$0.41	BU

age rates; this paper takes those rates as given. USDA (2018b) published a detailed account of its method for estimating gross trade damages on September 13, 2018.

Ultimately, MFP 1.0 paid on 2018 actual production of the MFP-eligible crops at the associated rates listed in Table 1. Payments were limited to $125,000 per person or legal entity, with separate limits for three different categories—non-specialty crops, specialty crops, and animal products—and an overall limit of $375,000 per applicant. MFP 1.0 was provided in two different tranches: the first half was announced on August 27, 2018, and the second half was announced on December 17, 2018.

MFP 2.0 (2019)

On May 23, 2019, President Trump announced that an additional $16 billion in aid would be made available to producers, with up to $14.5 billion being provided through MFP for the 2019 crop year. In implementing MFP 2.0, USDA largely followed the same methodology—estimating gross trade damages—but they updated the reference point from a single year to using data over a 10-year period (2009-2018). As noted in Table 1, the list of impacted commodities and the associated rates was expanded significantly with MFP 2.0. This particular change is discussed in greater detail in the section on Regional Analysis.

While the framework for estimating damages was largely unchanged with MFP 2.0, the application of the rates changed significantly. Perhaps most notably, the payment rates in Table 1 were not paid by crop on actual production, as was the case in 2018. Instead, USDA applied the rates to average production of all MFP-eligible crops in a county and then divided by the average acres planted in the county over the past 4 years. The resulting county payment rates were then paid on all acres planted to MFP-eligible crops on a farm in 2019 (not to exceed the acres planted on the farm in 2018). Payments were limited to $250,000 per person or legal entity, with separate limits for the three different categories—non-specialty crops, specialty crops, and animal products—and an overall limit of $500,000 per applicant.

In hopes that the impasse with China would be resolved and the full amount of aid would not be needed, MFP 2.0 was provided in three tranches: (1) the first 50% was announced on July 25, 2019, (2) an additional 25% was announced on November 15, 2019, and (3) the remaining 25% was announced on February 3, 2020. In counties where the $15/acre rate applied, the full amount was paid in the first tranche.

Distribution of MFP Assistance

Not surprisingly, the bulk of support from MFP 1.0 was provided to soybean, cotton, and sorghum producers, as reflected in the state-level payment totals in Figure 1.

For MFP 2.0, with a significantly expanded list of commodities, several other areas received additional support. As noted in Figure 2, the soybean- and cotton-producing areas of the country still received the bulk of the support. While this is discussed in greater detail below, nine of the top 10 recipient states were in the Midwest, and that region received almost 70% of the assistance under MFP 2.0.

Because the purpose of MFP is to help producers adjust to disrupted markets due to retaliatory tariffs (and largely the tariffs imposed by China), it stands to reason that the aid would be concentrated in areas with significant production of the commodities most directly impacted. As noted by USDA and reflected in Figure 3, MFP payments overlap areas where estimated damages are the highest (when compared to Figures 1 and 2).

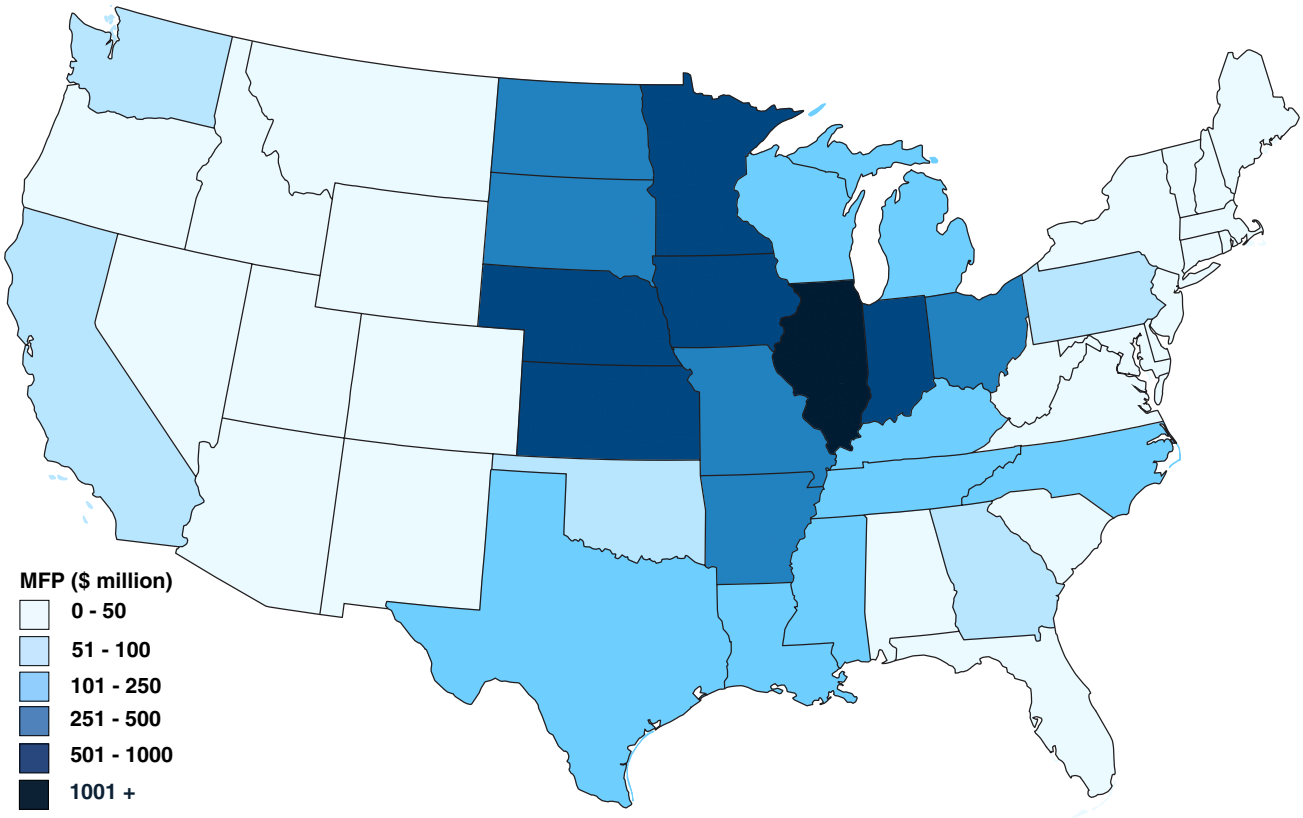

Figure 1. MFP 1.0 (2018) Payments by State (as of March 2, 2020).

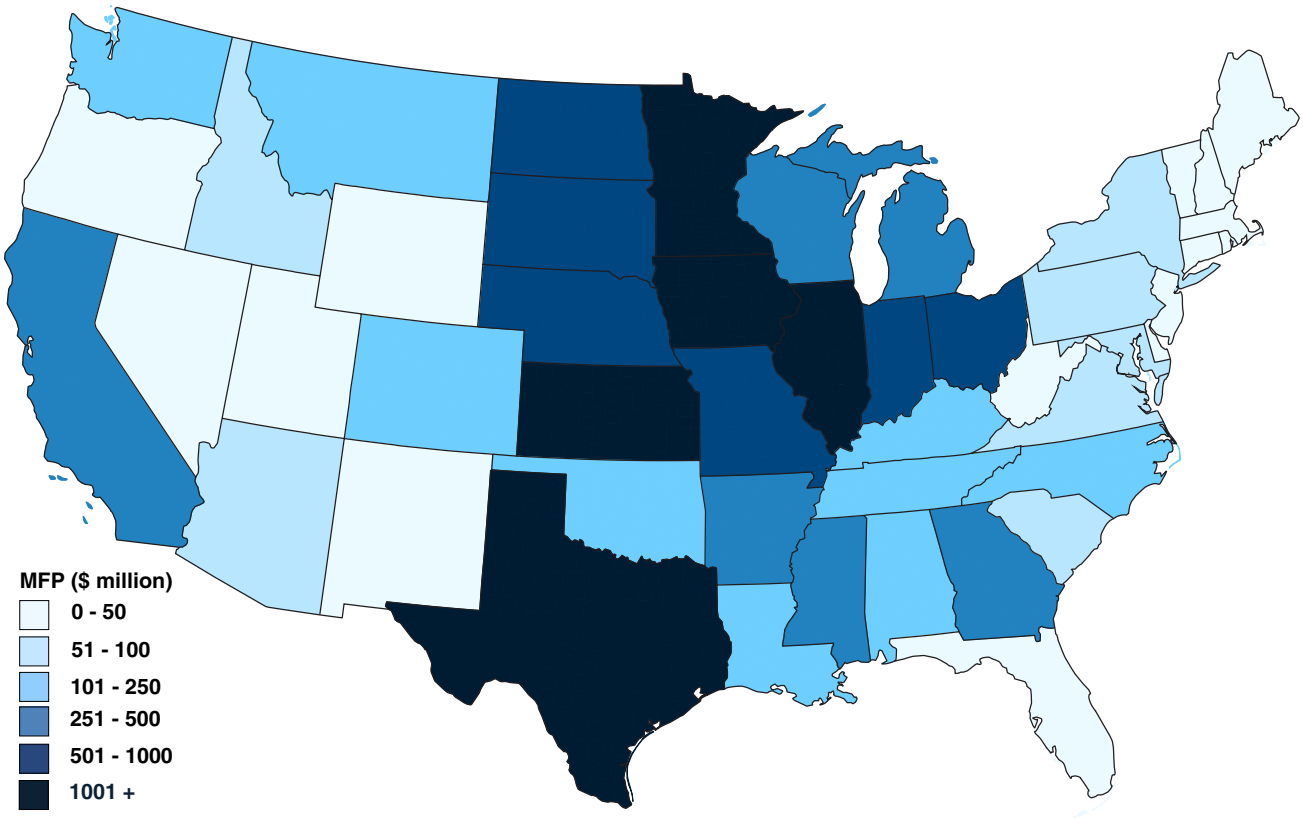

Figure 2. MFP 2.0 (2019) Payments by State (as of March 2, 2020).

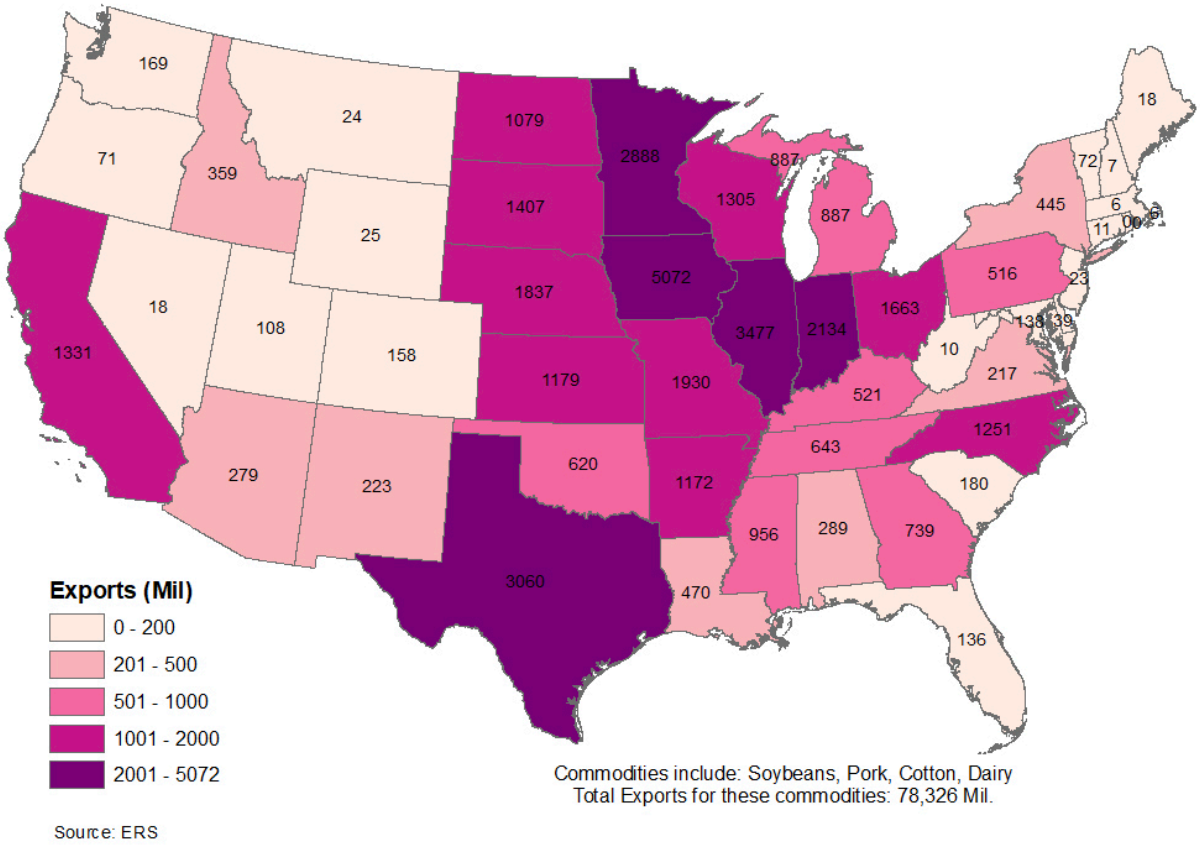

Figure 3. Exports of Major Tariff Affected Commodities (2017).

Regional Analysis

While MFP has undeniably been vital to the financial health of U.S. farms over the past two years, there have been recent complaints about regional bias in the administration of MFP 2.0. Despite those arguments, it appears that the biggest determinant of the regional distribution of MFP is the underlying estimates of gross trade damage and the point of reference on which the estimates are based. Importantly, MFP provides financial assistance that gives producers the ability to absorb some of the additional costs from having to delay or reorient marketing due to retaliatory tariffs, which is perhaps the most misunderstood part of the program. As noted in Figure 4, three crops—soybeans, cotton, and sorghum—made up the bulk of agricultural trade with China over the past several years.[1] These products were the ones most directly impacted by the tariffs—because they were the products being exported to China when the retaliatory tariffs were imposed. That is little consolation for corn producers, for example, that had exported up to $1.3 billion to China in 2012 but by 2017 was exporting just $142 million, owing in large part to actions on the part of the Chinese government that the World Trade Organization (WTO) has since found were inconsistent with China's obligations under the WTO's Agreement on Agriculture.[2] For other products like beef, American producers have been largely locked out of the Chinese market for the last 20 years. But, addressing those long-term inequities was the very purpose of the negotiations themselves. Moreover, as previously discussed, the trade damage estimates for MFP 2.0 were based on a survey of trends in U.S. bilateral trade over a 10-year period, in recognition that 2017 may not have been the most representative year on which to base the analysis.

[1] Importantly, USDA's analysis included retaliatory tariffs from several countries involved, but we focus on China here for illustration.
[2] For more on these cases, see DS511 on China's domestic support for agricultural producers and DS517 on China's Tariff Rate Quota (TRQ) administration for certain agricultural products in the WTO.

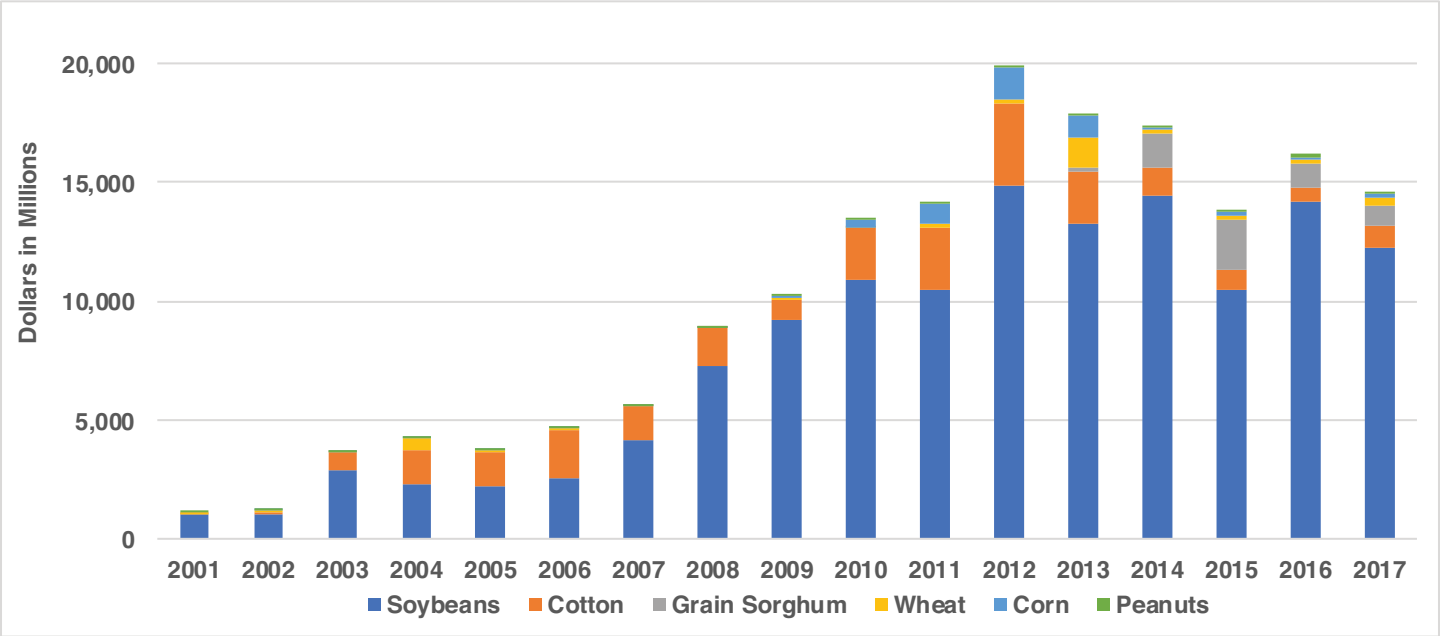

Figure 4. Major U.S. Agricultural Crop Exports to China.

For MFP 1.0 in 2018, USDA estimated gross trade damages relative to 2017 trade. When looking specifically at China, soybeans, cotton, and sorghum made up 72% of the $19.5 billion in agricultural trade with China in 2017 as reflected in Figure 5. As highlighted in Table 1 earlier, this resulted in relatively lower payment rates for some crops (e.g. corn at $0.01/bu).

In response to stakeholder feedback that 2017 was not a representative base year for certain commodities, USDA estimated gross trade damages relative to 2009-2018 trade for MFP 2.0. According to USDA (2019), the purpose of using the longer-run trend was "to account for other contributing variables, such as longstanding trade barriers imposed by China and other countries that have affected U.S. exports, as well as the longer-term impact of prolonged retaliatory tariffs." As noted in Figure 5, U.S. corn exports to China were $142 million in 2017, compared to $393 million in 2009-2018. By contrast, U.S. cotton exports to China were $978 million in 2017, compared to $1.575 billion in 2009-2018.

Equity Between Regions

Much has been made of the resulting county payment rates in MFP 2.0. To make the case for Southern bias in MFP 2.0, critics point out that McLean County, IL, received a payment rate of just $82/acre while Lubbock County, TX, received $145/acre. There are a lot of factors that drive the county payment rates, but perhaps none are as relevant or important as the distribution of planted acres within the county. For example, the $145/acre payment rate in Lubbock County is merely reflective of the fact that cotton (with a $0.26/lb rate) accounted for 84% of the payment rate in Lubbock County—as noted in Figure 6—while corn (with a $0.14/bu rate) accounted for 51% of the rate in McLean County. Had soybeans been the only crop planted in McLean County, the county payment rate would have been approximately $135/ac.

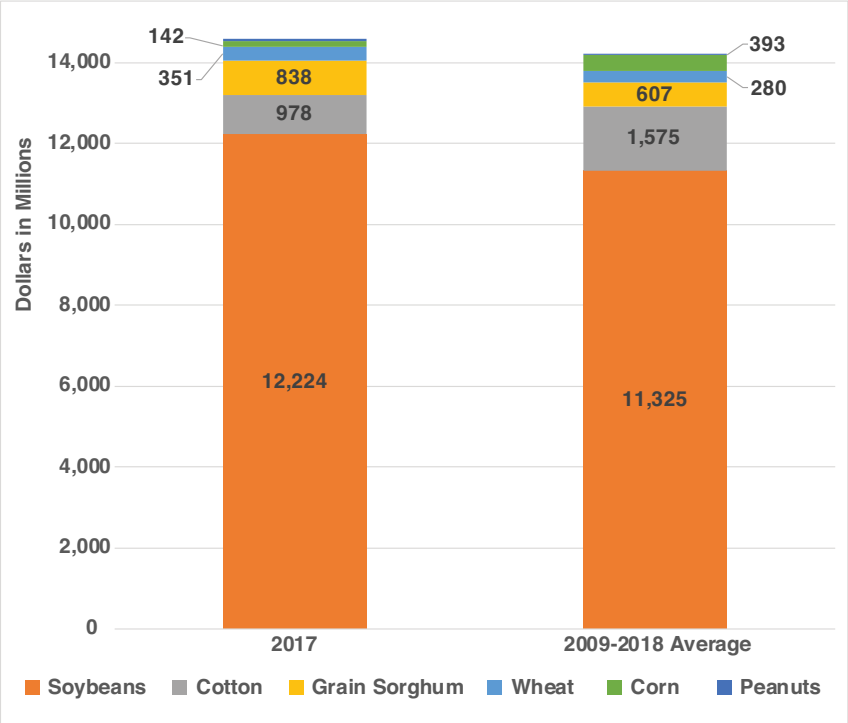

Figure 5. U.S. Exports to China of Select Crops in 2017 and 2009-2018.

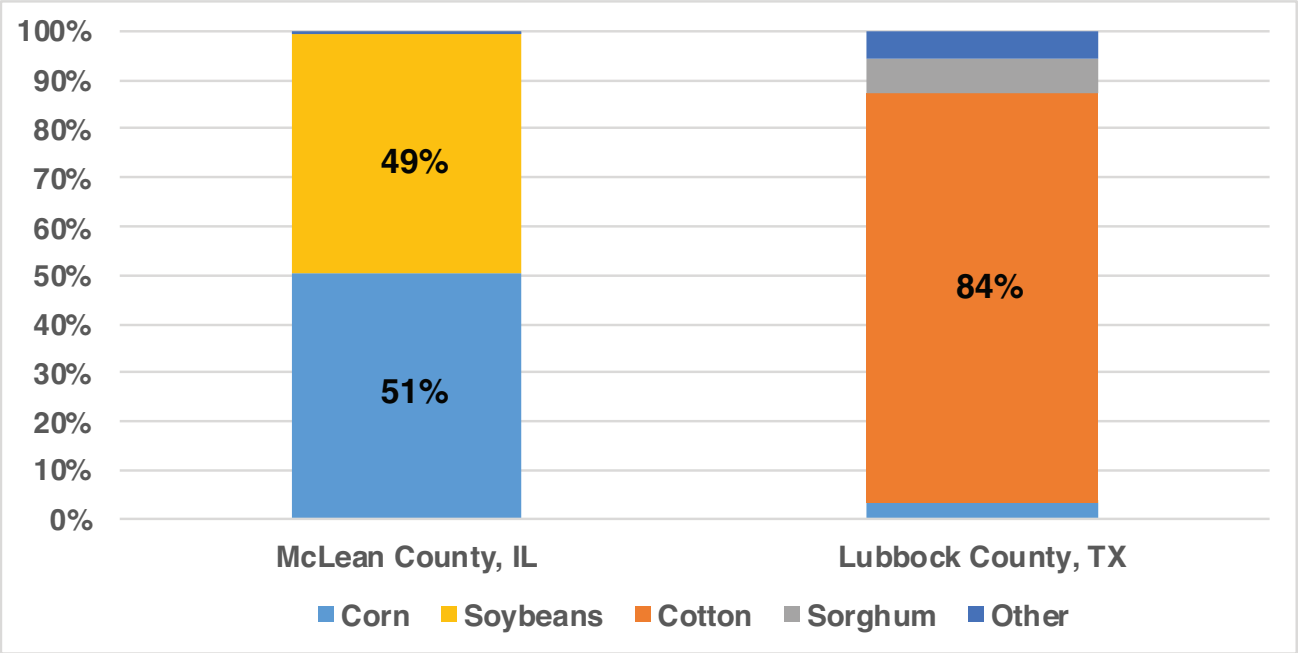

Figure 6: Distribution of Acres Planted by Crop (Average 2015-2019).

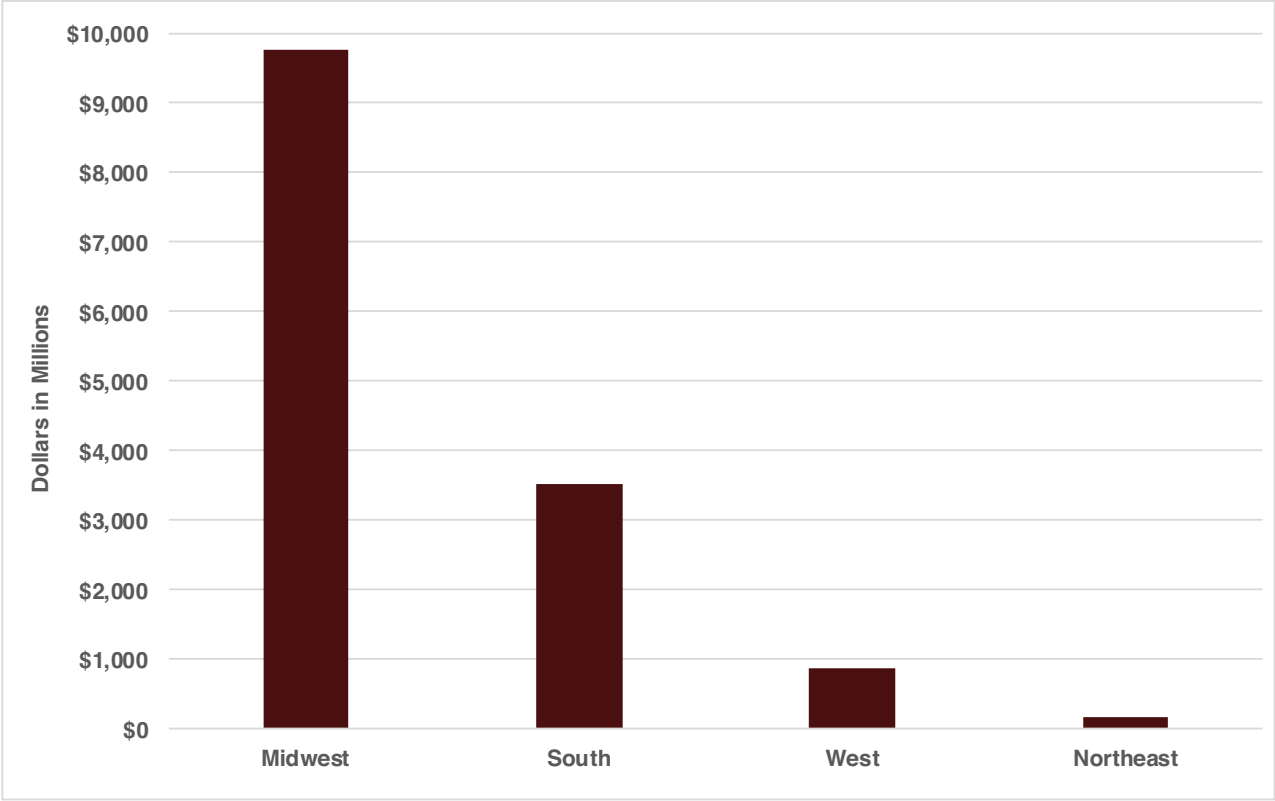

Figure 7. MFP 2.0 Payments by Census Region (as of March 2, 2020).

Put simply, counties with a significant presence of crops directly impacted by retaliatory tariffs had the highest payment rates. The only "bias" we find in the program was the decision to impose a maximum county payment rate of $150/acre, which most negatively impacted cotton producers. As noted in Figure 7, if one looks at where the latest assistance has gone, almost 70%—or just under $10 billion—has gone to the Midwest. In other words, the amount of support provided to the Midwest is more than double the rest of the country combined.

Equity Between Counties

While we find little validity to the complaints of regional inequity, there are certainly disparities between counties. A producer of a crop that was highly impacted by retaliatory tariffs (e.g. soybeans or cotton) that happens to produce in a county that predominantly grows a crop that was relatively less affected by retaliation (e.g. wheat) is certainly negatively impacted. The same logic applies to producers of irrigated crops that farm in counties with predominantly dryland production. To USDA's credit, the disparity was somewhat mitigated by the fact that Secretary Perdue imposed a minimum $15/acre payment on the first tranche of MFP 2.0. However, that's little consolation to a cotton or soybean producer receiving $15/acre given that those commodities were more severely impacted by retaliation.

Impact of MFP on Representative Farms

AFPC currently maintains 63 representative crop farms across major production regions of the United States. This paper focuses on MFP for non-specialty crops in part because very little specialty crop production occurs on the representative farms. The representative farms have been used for over 30 years to provide feedback as to the likely consequences of policy changes on real farm operations across the United States. Locations, descriptions, and financial characteristics of the representative farms and dairies along with more information on the representative farm process can be found in AFPC Working Paper 19-1. Representative farm nomenclature follows a standard format where the first two letters indicate the abbreviation for the state in which a farm is located, the next letter (or two letters) generally give(s) regional and/or farm-type descriptors, and the numbers in the name reflect the total acres of cropland on a given farm.

To evaluate the farm-level impact of MFP on the financial condition of AFPC representative farms, two scenarios were analyzed:

- **No MFP** – this base scenario examines the financial outlook for the farms if no MFP was received by producers.
- **MFP** – assumes MFP 1.0 for crop farms paid on eligible production in 2018 and on planted acres of eligible commodities on the farm in 2019 for MFP 2.0 (at the respective county rates). The third tranche of MFP 2.0 appears in the 2020 calendar year financial statements for the representative farms.

For the farm-level MFP analysis, a study period of 2018-2020 was utilized with the results focusing on projected ending cash reserves and the probabilities of farms having negative ending cash reserves at the end of 2020 (i.e., the probability of a having to refinance a carryover debt). Commodity prices and rates of change for input prices, interest rates, and land inflation rates published in the FAPRI 2019 August Baseline Update for U.S. Agricultural Markets were utilized. Table 2 displays ending cash reserves and the probability of negative ending

Table 2. Ending Cash Reserves and Probabilities of Negative Ending Cash for AFPC Representative Farms under Base (No MFP) and MFP Scenarios, 2020.

	2020 Ending Cash Reserves			2020 Probability of Negative Ending Cash		
	No MFP	MFP	Difference	No MFP	MFP	Difference
	--1,000--	--1,000--	--1,000--	--%--	--%--	--%--
IAG1350	-768	-641	127	100.0	100.0	0.0
IAG3400	-380	-121	259	84.6	61.6	-23.0
NEG2400	-139	39	178	64.4	47.0	-17.4
NEG4500	-1,756	-1,423	333	99.4	97.6	-1.8
NDG3000	-183	19	202	78.8	48.4	-30.4
NDG9000	868	1,438	570	12.0	0.4	-11.6
ING1000	-25	54	79	60.4	28.8	-31.6
ING3250	-61	209	270	55.4	27.8	-27.6
MOCG2300	39	201	162	49.2	29.0	-20.2
MOCG4200	677	938	261	11.4	3.4	-8.0
MONG2300	-322	-155	166	91.0	76.4	-14.6
LANG2500	-452	-156	296	93.2	69.6	-23.6
TNG2500	-362	-82	281	90.2	63.4	-26.8
TNG5000	228	669	441	34.4	9.8	-24.6
NCSP2000	-1,004	-887	118	99.8	99.4	-0.4
NCC2030	407	517	109	0.0	0.0	0.0
SCC2000	424	556	131	2.4	0.0	-2.4
SCG3500	837	1,029	192	1.6	0.0	-1.6
TXNP3450	212	443	231	31.0	11.2	-19.8
TXNP10880	1,820	2,614	794	10.4	3.0	-7.4
TXPG2500	43	175	132	42.0	27.0	-15.0
TXHG2700	-232	-115	117	85.6	72.0	-13.6
TXWG1600	-171	-97	74	85.8	74.6	-11.2
WAW2800	288	354	66	8.0	4.0	-4.0
WAW10000	1,039	1,272	233	8.4	5.6	-2.8
WAAW5500	-318	-253	65	96.0	92.2	-3.8
ORW4500	-91	-58	33	78.2	70.4	-7.8
MTW8000	989	1,047	58	0.0	0.0	0.0
KSCW2000	173	266	93	5.8	0.6	-5.2
KSCW5300	482	778	296	13.2	2.8	-10.4
KSNW4000	-124	-24	100	72.8	52.6	-20.2
KSNW7000	-109	107	217	59.6	41.6	-18.0
COW3000	-106	-85	21	92.4	89.0	-3.4
COW6000	-851	-788	64	100.0	100.0	0.0

Table 2. Ending Cash Reserves and Probabilities of Negative Ending Cash for AFPC Representative Farms under Base (No MFP) and MFP Scenarios, 2020 (Continued).

	2020 Ending Cash Reserves			2020 Probability of Negative Ending Cash		
	No MFP	MFP	Difference	No MFP	MFP	Difference
	--1,000--	--1,000--	--1,000--	--%--	--%--	--%--
TXSP2500	-216	53	270	87.2	36.2	-51.0
TXSP4500	-411	114	526	81.2	37.2	-44.0
TXEC5000	21	659	638	48.4	8.6	-39.8
TXRP3000	-464	-333	131	99.2	98.0	-1.2
TXMC2500	-190	92	282	68.2	40.2	-28.0
TXCB3750	-738	-78	661	96.6	58.4	-38.2
TXCB10000	-236	889	1,126	59.6	18.0	-41.6
TXVC5500	725	1,412	688	8.4	0.0	-8.4
ARNC5000	1,300	1,843	543	5.2	2.4	-2.8
TNC3000	510	805	294	2.0	0.0	-2.0
TNC4050	122	630	509	38.8	6.0	-32.8
ALC3500	990	1,310	320	0.2	0.0	-0.2
GAC2500	773	1,019	246	1.2	0.0	-1.2
NCNP1600	-733	-556	177	100.0	99.2	-0.8
CAR1200	439	471	31	1.2	1.0	-0.2
CAR3000	-477	-371	107	62.0	55.6	-6.4
CABR1000	189	227	38	16.8	14.2	-2.6
CACR800	-264	-237	27	98.8	97.0	-1.8
TXR1500	-226	-194	32	91.4	89.6	-1.8
TXR3000	-36	31	67	52.8	44.8	-8.0
TXBR1800	68	119	51	30.8	24.6	-6.2
TXER3200	-1,010	-821	190	100.0	100.0	0.0
LASR2000	166	228	61	18.8	11.8	-7.0
ARMR6500	-392	437	829	61.0	27.8	-33.2
ARSR3240	101	375	273	37.0	20.2	-16.8
ARWR2500	-546	-319	227	97.0	83.6	-13.4
ARHR4000	-249	2	251	68.8	47.8	-21.0
MSDR5000	74	647	573	38.4	16.4	-22.0
MOBR4000	-677	-211	466	92.4	68.8	-23.6

cash in 2020 for each representative farm under the No MFP and MFP alternatives. Changes in these numbers are also reported for each farm. Figures 8-11 group the representative farms by farm type based on primary source of receipts. These figures provide a side-by-side comparison of the probabilities of negative ending cash under the two scenarios. AFPC has adopted a color-coded scoring method for financial measures based on probabilities of outcomes. As this report focuses on ending cash reserves, farms are classified as:

- **Good** – good liquidity position (green in charts) if probability of negative ending cash in 2020 is less than 25 percent.
- **Marginal** – marginal liquidity position (yellow in charts) if probability of negative ending cash in 2020 is between 25 and 50 percent.
- **Poor** – poor liquidity position (red in charts) if probability of negative ending cash in 2020 is greater than 50 percent.

The following is a description by farm classification of the financial impact of MFP on ending cash reserves and associated probabilities of refinancing. A summary of how many farms facing the most severe cashflow stress improve their ranking is also provided. A common theme across all of the farms is that—for the farms in counties with higher county payment rates—MFP was a significant help but in no case covered all impacts caused by the retaliatory tariffs.

Feedgrain and Oilseed Farms:

AFPC maintains 23 representative feedgrain and oilseed farms in 10 states. The MFP scenario resulted in an average increase in ending cash reserves in 2020 of $240,000. Furthermore, the average likelihood of refinancing in 2020 dropped from 55.8% to 41.3% across all 23 farms as a result of MFP as compared to the Base (No MFP) scenario. Further examination of individual farms reveals that payments received under MFP resulted in four farms moving out of the most severe cashflow (liquidity) situation as described by AFPC (>50% probability of negative ending cash reserves in 2020). The No MFP scenario has 57% of the feedgrain and oilseed farms in poor liquidity position; only 39% of these farms are facing the most extreme cashflow position under the MFP scenario.

Wheat Farms:

AFPC currently works with 11 representative wheat farms in 5 different states. Despite the relatively low payment rate for wheat, a $113,000 average increase in ending cash reserves in 2020 resulted from payments received under MFP 1.0 and MFP 2.0. The average probability of negative ending cash across all farms in 2020 dropped from 48.6% to 41.7%, a 6.9% improvement resulting from payments in MFP. The MFP scenario also resulted in a shift of one representative wheat farm out of the most serious threat of cashflow problems at the end of 2020.

Cotton Farms:

AFPC currently has 14 representative farms in six states with cotton as the primary commodity. On average, the representative cotton farms experienced a $458,000 increase in 2020 ending cash reserves under

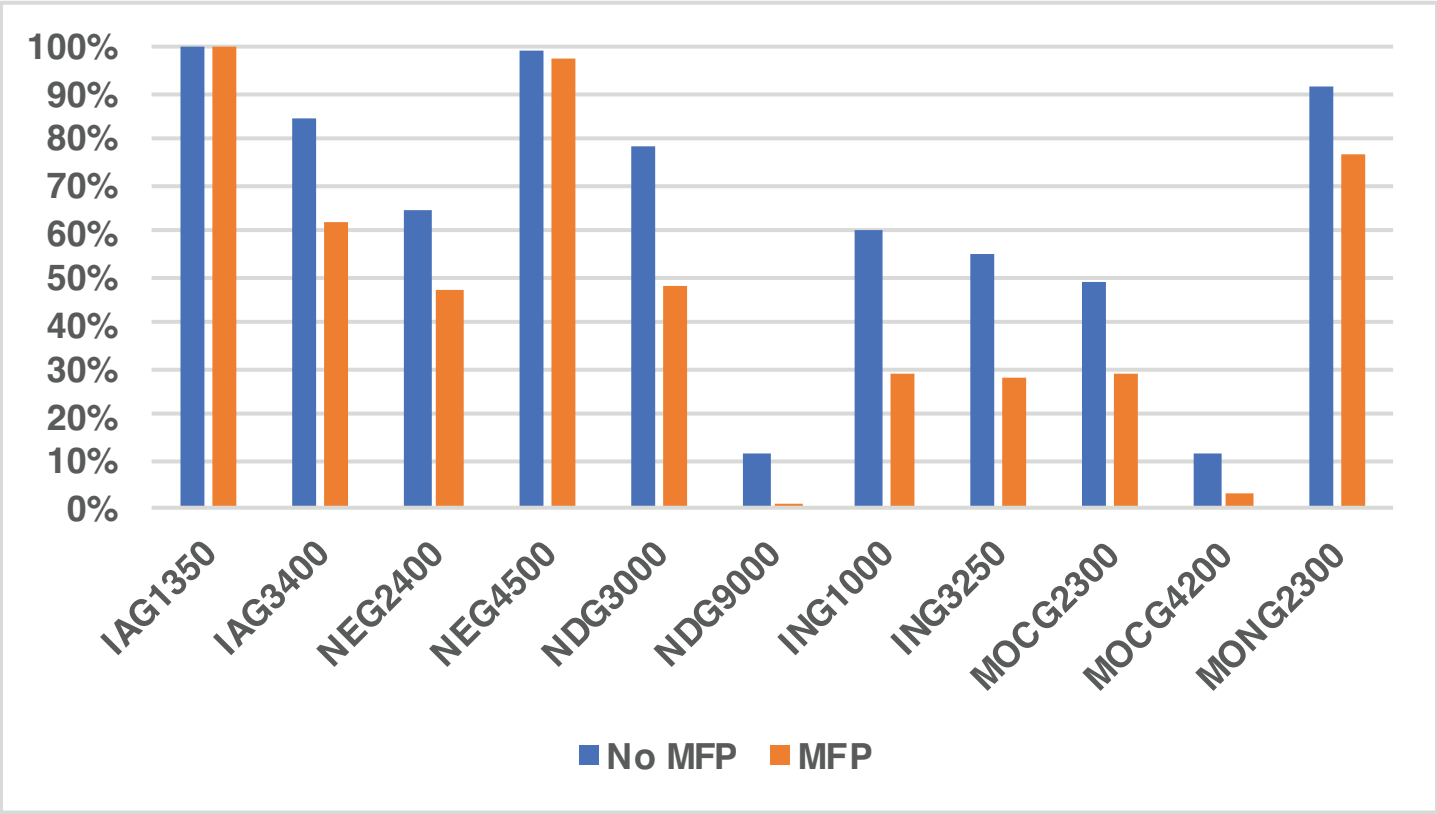

Figure 8.1. Probabilities of Negative Ending Cash for Select AFPC Representative Feedgrain and Oilseed Farms under No MFP and MFP Alternatives, 2020.

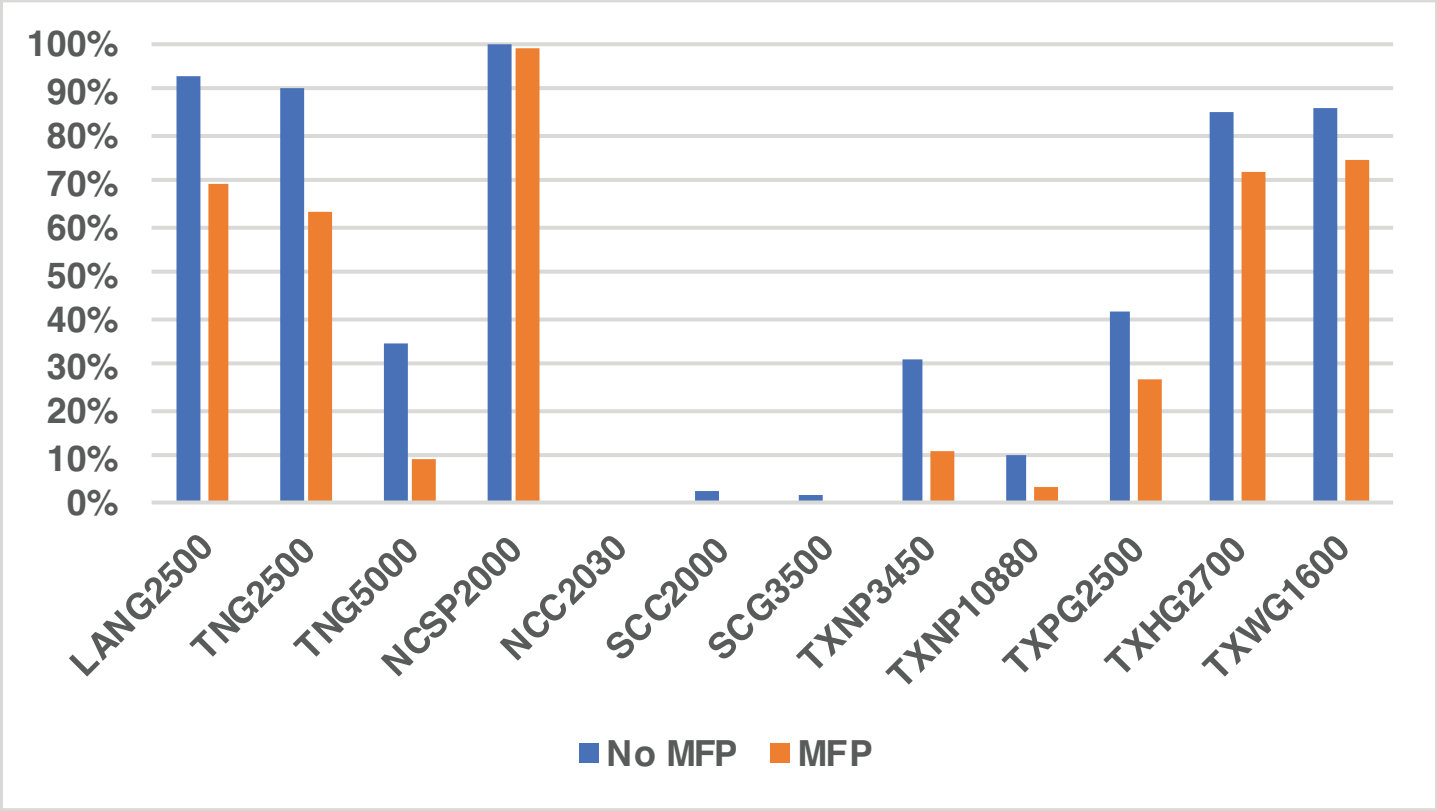

Figure 8.2. Probabilities of Negative Ending Cash for Select AFPC Representative Feedgrain and Oilseed Farms under No MFP and MFP Alternatives, 2020.

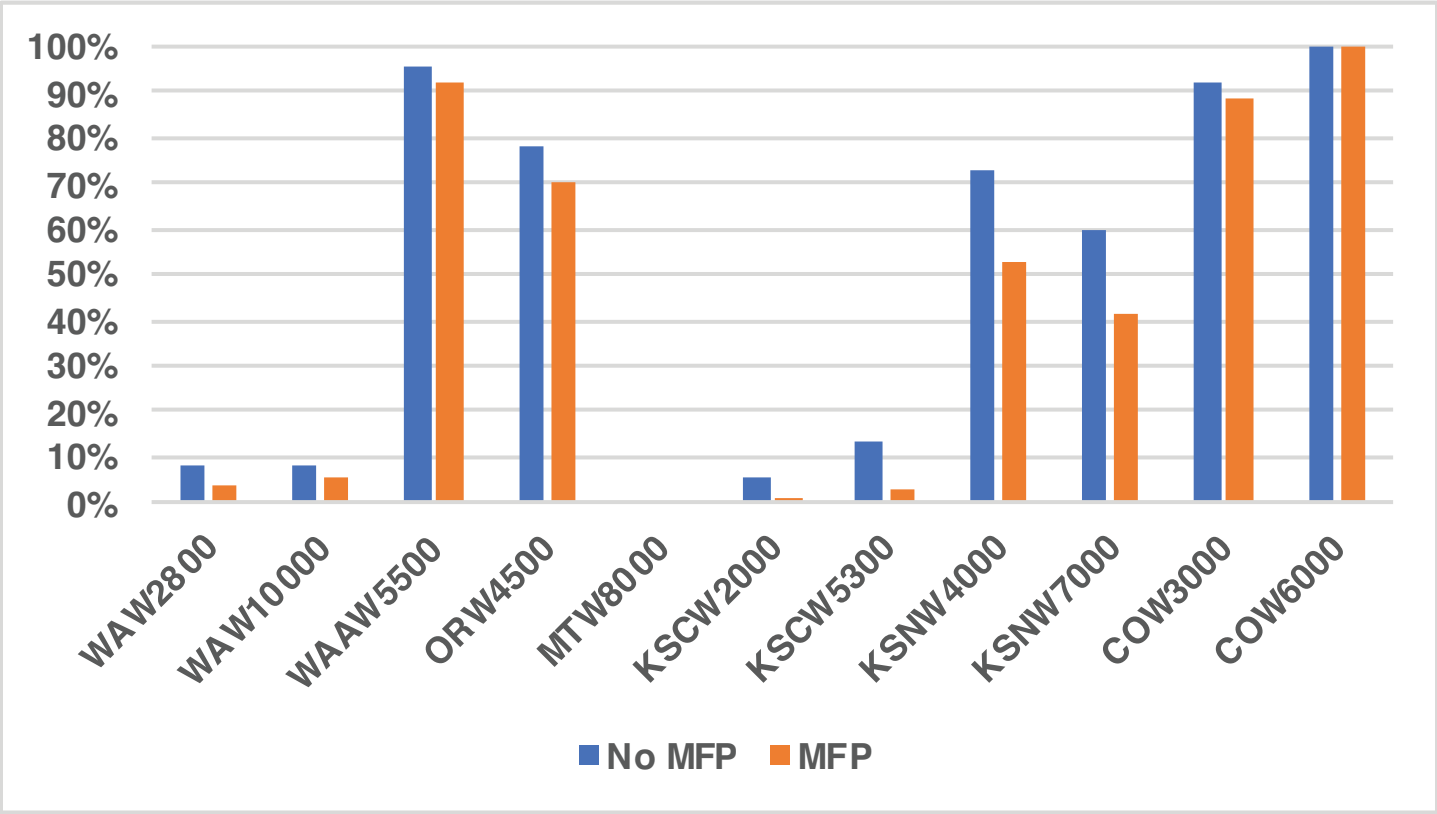

Figure 9. Probabilities of Negative Ending Cash for AFPC Representative Wheat Farms under No MFP and MFP Alternatives, 2020.

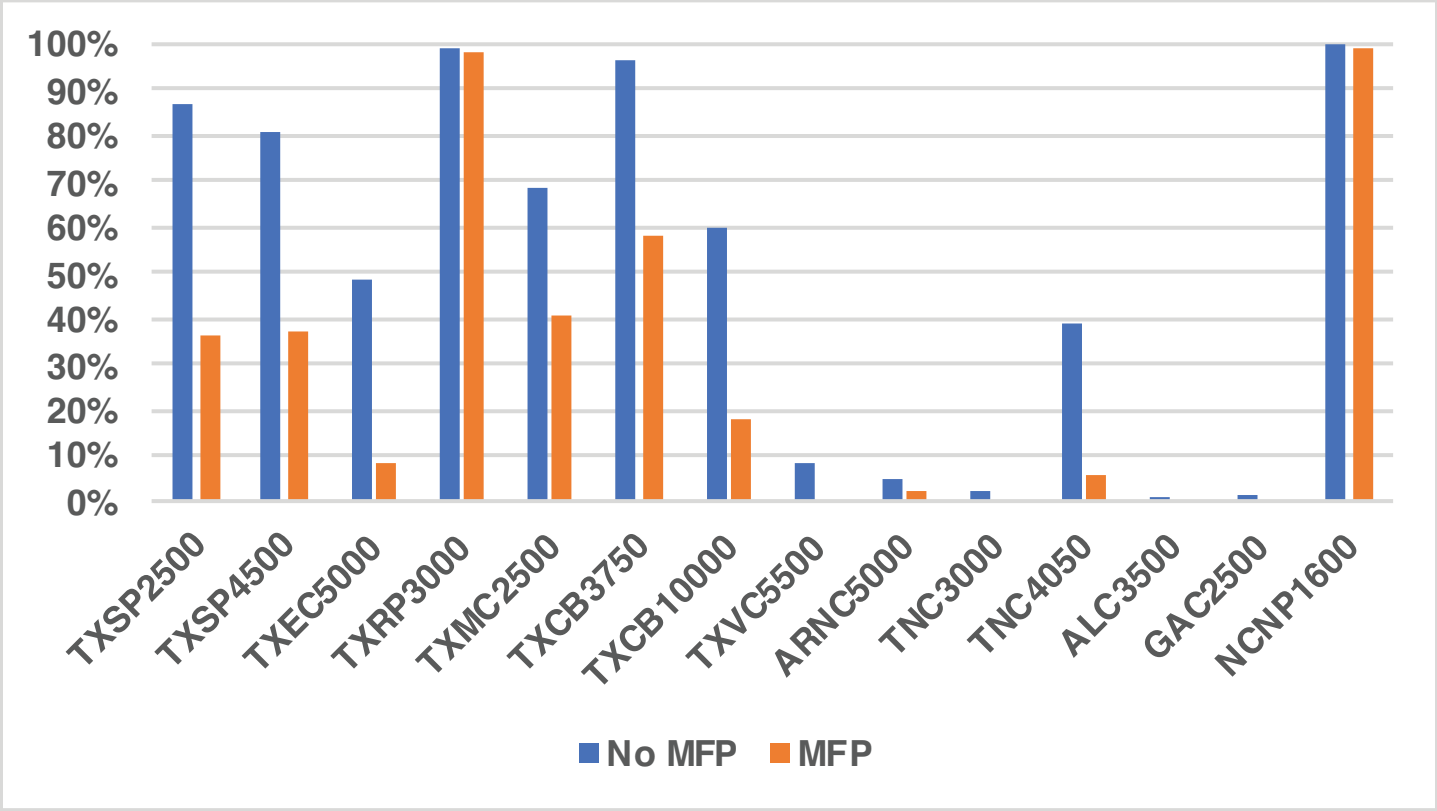

Figure 10. Probabilities of Negative Ending Cash for AFPC Representative Cotton Farms under No MFP and MFP Alternatives, 2020.

the MFP scenario as compared to the No MFP base scenario. The average likelihood of refinancing carryover debt in 2020 dropped from 49.7% across all farms under the No MFP scenario to 28.9% when receiving MFP, a 20.9% decline. Similarly, payments received through MFP resulted in four farms improving their cashflow position significantly enough to no longer be considered in poor liquidity position at the end of 2020. The No MFP scenario had 50% of the representative cotton farms classified in poor liquidity position, while the MFP alternative resulted in only 21% of cotton farms in this unfavorable cashflow situation.

Notably, two farms did not see marked improvements in their cash flow projections. TXRP3000 is in Jones County, TX, which had a relatively low MFP 2.0 payment rate of $46/ac, largely reflecting a significant presence of wheat production in the county. Similarly, NCNP1600 is in Edgecombe County, NC, which had a payment rate of $70/ac, which was affected by the relatively large share of corn and peanut production in the county.

Rice Farms:

AFPC maintains 15 representative rice farms in six rice-producing states across the nation. Across all AFPC rice farms, an average increase of $215,000 in ending cash reserves in 2020 resulted from payments received under the MFP alternative. The average probability of farms having to refinance carryover debt dropped from 57.8% to 46.9% under the MFP alternative, an improvement of 10.9%. Three farms were able to significantly improve their liquidity position. Under the No MFP scenario, 60% of AFPC rice farms were in the worst AFPC

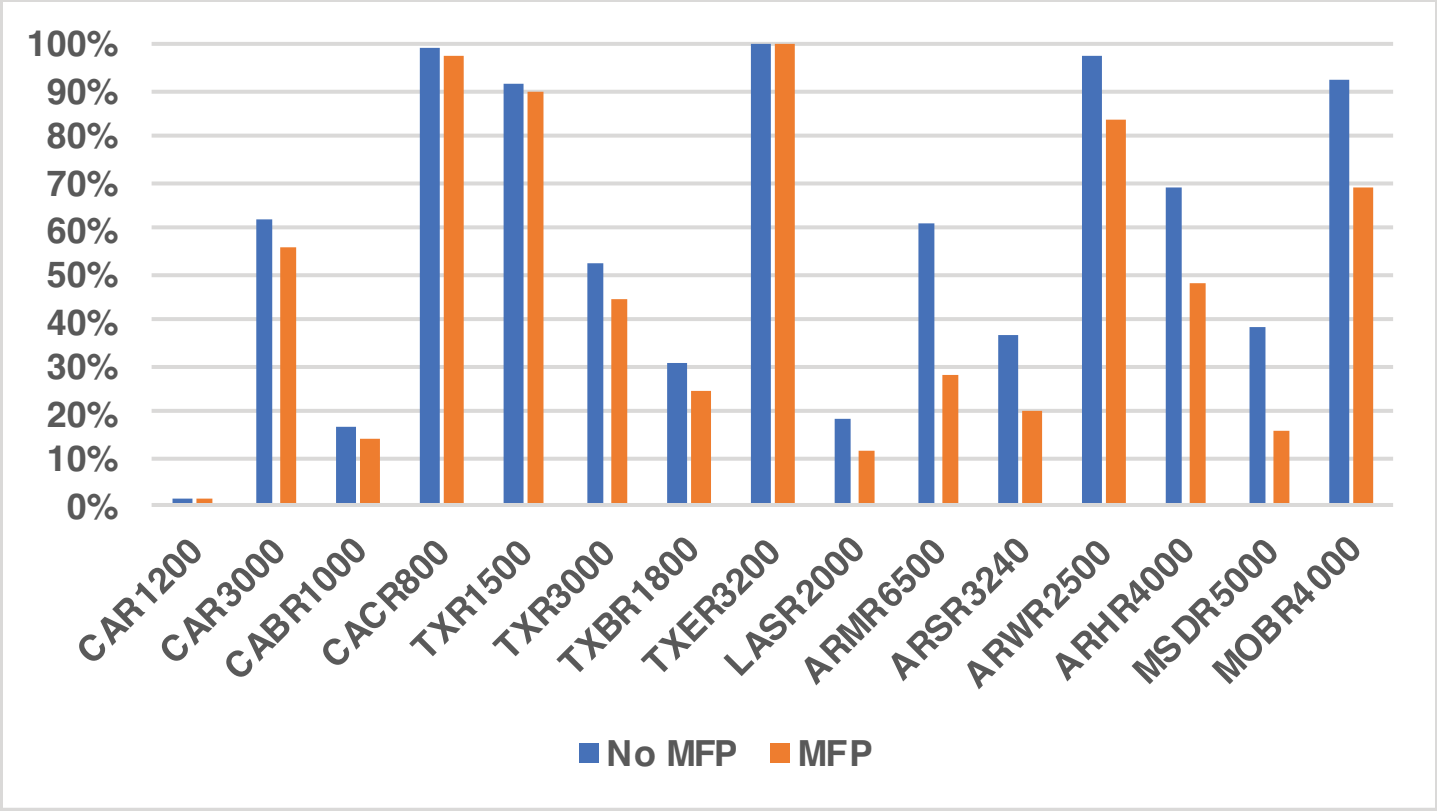

Figure 11. Probabilities of Negative Ending Cash for AFPC Representative Rice Farms under No MFP and MFP Alternatives, 2020.

cashflow classification; conversely, 40% were under the highest threat of experiencing cashflow problems under the MFP alternative.

Figure 12 depicts a comparison of the number of farms in good, marginal, and poor liquidity position in 2020 under No MFP and MFP.

Impact of MFP on the Rural Economy

Beyond examining the impact of MFP on the representative farms and examining equity within the program, we also examined the impact of MFP on the broader economy, recognizing that producers turn over income within the local economies in which they operate. Our analysis used IMPLAN 2018 data to examine the impacts of the 2018 and 2019 Market Facilitation Program payments (Tables 3 and 4). We analyzed the payments at the state level and combined the data for the national effect of the 2018 and 2019 MFP payments.

The direct effect of the MFP payments includes the expenditures by the producers. The indirect and induced effect reflects the multiplied effect as businesses purchase along their supply chains, as well as the house-

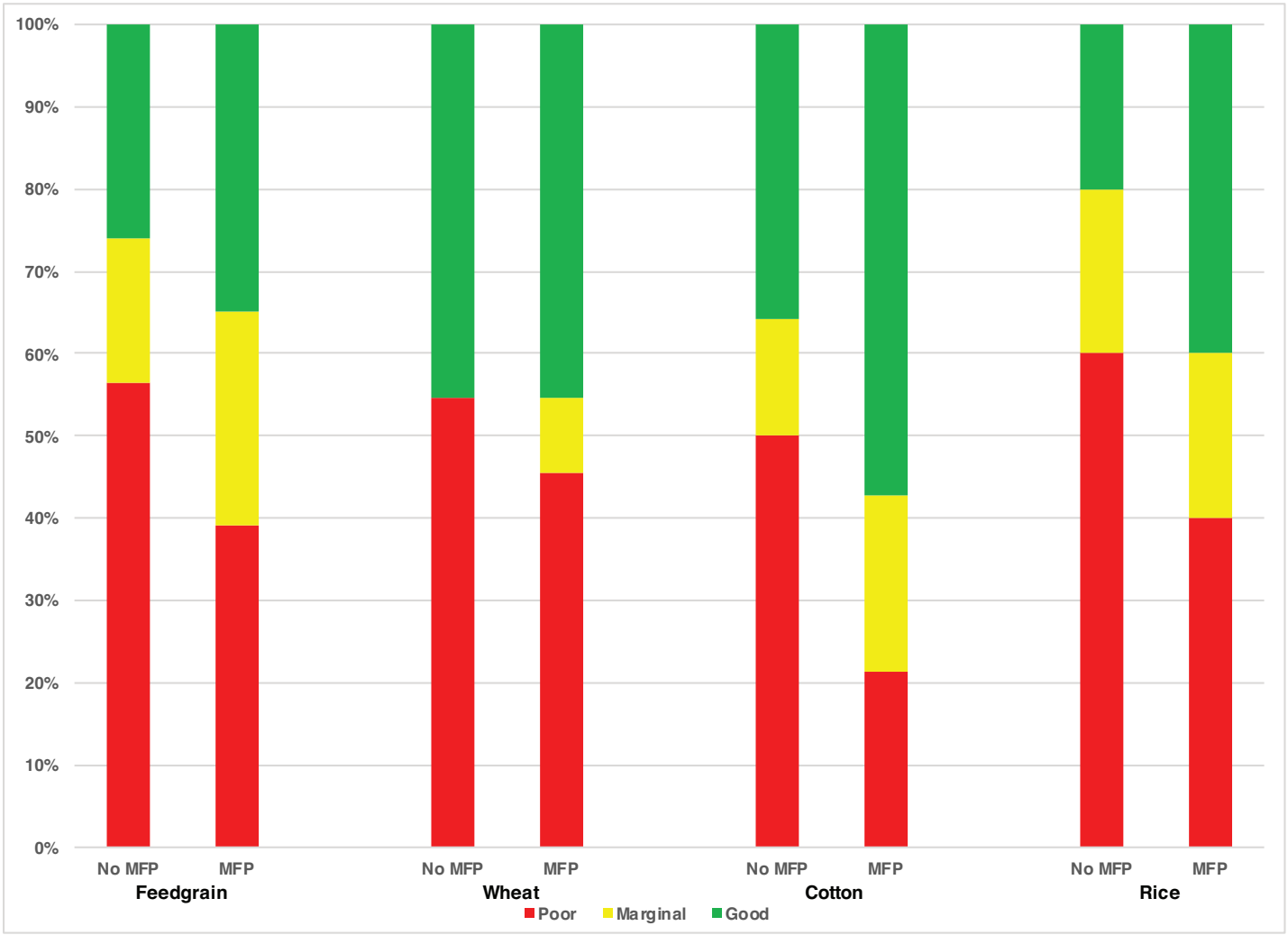

Figure 12. Percentage of AFPC Representative Farms in Good, Marginal, and Poor Cashflow Position by Farm Type Under No MFP and MFP Alternatives, 2020.

Table 3. 2018 MFP Payments (2018 Dollars).

USA	Employment	Labor Income	Value Added	Output
1 - Direct	23,189	$1,791,629,287	$3,562,085,819	$8,503,082,586
2 - Indirect	25,320	$1,196,428,950	$1,970,387,370	$4,118,940,604
3 - Induced	16,381	$766,925,738	$1,376,242,756	$2,414,364,777
Total	64,889	$3,754,983,975	$6,908,715,945	$15,036,387,967

Table 4. 2019 MFP Payments (2019 Dollars).

USA	Employment	Labor Income	Value Added	Output
1 - Direct	75,441	$2,878,518,924	$5,213,947,233	$14,192,829,490
2 - Indirect	48,545	$2,285,933,441	$3,682,596,609	$7,638,769,437
3 - Induced	27,932	$1,333,912,708	$2,392,833,727	$4,195,747,384
Total	151,918	$6,498,365,073	$11,289,377,569	$26,027,346,310

hold expenditures of employees of both commodity-related businesses and all indirectly affected businesses. The total effect is a sum of the direct, indirect and induced effects. Output measures the overall economic activity and includes Value Added, which measures the return to local resources or the contributions to GDP, and Labor Income, which reflects the effects of wages and profits on the incomes of households in the state. Employment reflects the job count and does not distinguish between full-time and part-time workers.

For 2018, the initial MFP 1.0 payments of $8.6 billion led to a total economic output of $15 billion, with $6.9 billion contributing to the national GDP and $3.75 billion in labor income. For 2019, the initial MFP 2.0 payments of $14.2 billion led to a total economic output of $26 billion, with $11.3 billion contributing to the national GDP and $6.5 billion in labor income. In total, MFP has had a $41 billion impact on the rural economy over the past two years.

Conclusion

On January 15, 2020, the U.S. and China signed a Phase One agreement that aims to increase exports from the U.S. to China to $80 billion over the next two years, and the deal entered into force on February 14, 2020. Initial market response to the Phase One deal has been tepid, and the spread of the coronavirus is dampening the Chinese economy. While no aid has been provided for 2020, President Trump recently tweeted that "until such time as the trade deals with China, Mexico, Canada, and others fully kick in, that aid will be provided by the federal government."

In the meantime, two consecutive years of trade aid have been incredibly important to the economic viability of farms, in some cases preventing more farmers from having to sell and leave the business.

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