

AEDE Agricultural Report 2018-003**USDA Market Facilitation Program and
the Impacts on Ohio Farm-Level
Income****Authors:****Haylee Zwick**

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Introduction

Net farm income for the United States is forecast to decline in 2018 compared to 2017, at a value of \$65.7 billion compared to \$77 billion. Net farm income for Ohio in 2018 will not be released until August 2019, but a corresponding decline in farm income is expected after an increase in 2017. The forecast decline in net farm income is representative of a decline in commodity prices and an increase in input and operational costs. The decline in commodity prices can partially be tied to the ongoing trade dispute between the United States and China. In an effort to assist producers in response to trade damage from retaliation by foreign nations, the United States Department of Agriculture, (USDA) under the direction of the President designed a one-year Trade Mitigation Plan that will authorize up to \$12 million in payments to U.S. farmers affected by trade tariffs. The plan consists of three parts: the Market Facilitation Program (MFP), a Food Purchase and Distribution Program, and an Agricultural Trade Promotion Program. This report looks at the MFP and draws conclusions on the estimated Ohio per acre payments. The program is designed to make payments on 50% of 2018 production with a potential second payment later if conditions remain. Calculated per acre Ohio payments for the MFP are: \$0.94 for corn, \$47.85 for soybeans, and \$5.25 for wheat. A 1,100-acre Ohio farm with a crop rotation of 60% soybeans and 40% corn with projected Ohio yields is expected to receive \$32,508 from the program. Total expected payments to Ohio are estimated at \$255.4 million.

U.S. and Ohio Net Farm Income

On August 30, 2018, USDA published their forecast for U.S. farm sector income and finances. (USDA-ERS). According to the report, U.S. net farm income, in inflation-adjusted real dollars, is expected to decline by nearly \$11.4 billion from last year (USDA, 2018). The 14.8% decrease, from \$77.0 billion in 2017 to \$65.7 billion in 2018, is due to a rising continuum of input and operational costs such as fuels/oils, interest rates, feed and hired labor. Figure 1 illustrates that it is likely 2018 net farm income levels could be comparable with 2016.

USDA announced in its report that net farm income projections do not include expected payments from the Market Facilitation Program (MFP), which has been developed as a response to imposed tariffs on U.S. products and the corresponding lower commodity prices (USDA, 2018). The MFP payments will contribute an increase in the net farm income projection, but not enough to counter the projected decrease in net farm income. Farm income, including the MFP program, is still expected down in 2018 compared to 2017.

U.S. and Ohio Net Farm Income (Real 2018 Billion Dollars)

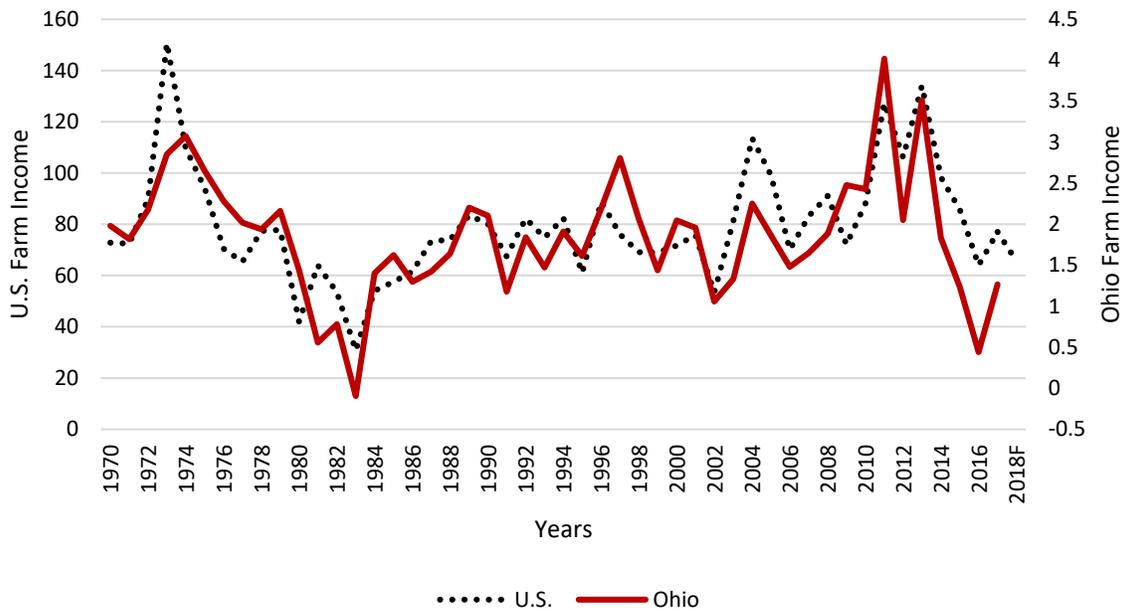


Figure 1: U.S. and Ohio Net Farm Income

In addition to the U.S. net farm income forecast, the first Ohio net farm income and net cash farm income estimates were released for 2017. The substantial rebound in Ohio net farm income, of nearly \$824 million from 2016 to 2017, correlates with U.S. trends coming back from an 87% decline since 2013 (Figure 1). From 1970 to 2017, trends in net farm income for the U.S. and Ohio have been relatively analogous, except for now. Using a simple linear regression analyzing historical Ohio net farm income, the latter is calculated to rise from \$1.2 billion in 2017 to \$1.5 billion in 2018; however, this forecast is unlikely to be realized due to the downward trend of the U.S. forecast and the current volatility in worldwide commodity trade. Applying the same forecast of a 14.8% drop in U.S. farm income and applying it to Ohio farm income, an approximated estimate of \$1 billion for 2018 Ohio net farm income is calculated.

An earlier report outlining the impact of the retaliatory tariffs by the Chinese on U.S. corn and soybean imports to Ohio producers found that there could be a 59% drop in Ohio farm income over five years (Brown & Sheldon, 2018). The likelihood of negative cash flow for corn and soybean producers in 2018 is likely for producers who did not utilize early season forward

contracting. Continued negative cash flows will lead to a reduction in production and in some cases, an exit of producers from the industry.

Commodity Price Effects

Over the course of 2018, the U.S. has implemented import tariffs on steel, aluminum, and products associated with claimed theft of intellectual property by China. However, in the wake of these imposed tariffs, international trading partners have begun implementing retaliatory tariffs resulting in billion-dollar disruptions to the U.S. economy, including agriculture. Table 1 breaks down the effects on commodity prices and displays the absolute price change from the World Agricultural Supply and Demand Estimates (WASDE) average farm prices, both before and after tariff implementation. U.S. pork experienced an earlier retaliation compared to other commodities, thus resulting in the use of the February 2018 WASDE for the pre-tariff average farm price. The May WASDE serves as the pre-tariff reference price for cotton, corn, dairy, soybeans, sorghum, and wheat.

Commodity Price Effects			
Commodity	WASDE Pre-Tariffs¹	WASDE Post-Tariffs²	Absolute \$ Change
Cotton	\$0.65 / lb.	\$0.75 / lb.	+0.10 / lb.
Corn	\$3.80 / bu.	\$3.50 / bu.	-\$0.30 / bu.
Dairy (milk)	\$16.45 / cwt.	\$16.40 / cwt.	-\$0.05/ cwt.
Pork (3 rd quarter)	\$135.73 / head ³	\$120.49 / head ³	-\$15.24 / head ³
Soybeans	\$10.00 / bu.	\$8.60 / bu.	-\$1.40 / bu.
Grain Sorghum	\$3.60 / bu.	\$3.30 / bu.	-\$0.30 / bu.
Wheat	\$5.00 / bu.	\$5.10 / bu.	+\$0.10 / bu.

¹ Pre-Tariff WASDE: [May 2018](#) Report for cotton, corn, dairy, soybeans, sorghum, and wheat. [February 2018](#) WASDE Report for pork.

² Post-Tariff WASDE: [September 2018](#) Report

³ Based on [USDA Livestock Slaughter Report](#) of 277 lbs. per head

Table 1: Commodity Price Effects

WASDE quarterly prices for pork are expressed in dollars per hundred-weight. To convert the dollars per hundred to dollars per head, a conversion weight of 277 pounds per head was applied. The conversion rate is taken from the USDA-NASS Livestock Slaughter Report published on August 23, 2018 (USDA-NASS, 2018).

Comparing WASDE reports in this manner does not take into account adjustments in commodity production. For oilseeds, the world supply has increased 21 million metric tons, partially due to an increase in U.S. soybean yield and partially due to a projected increase in South American production. For grains, world production has increased by 70 million metric tons. The increase in global supply, holding all else equal, likely would have a negative impact on prices. Table 1 illustrates price decreases for corn, dairy, pork, soybeans, and sorghum. The inclusion of import tariffs on U.S. commodities has influenced commodity specific exports, but should not be held fully accountable for the drop in projected market prices.

The Chinese import tariff on U.S. soybeans has increased the price difference between the price of U.S. soybeans and that of the rest of the world. For Chinese importers of soybeans, the price at which they would be indifferent between the two options is when the price of U.S. soybeans plus the tariff rate and transportation costs is equal to the price of an alternative market plus the transportation costs. This assumes that the underlying goods are the same quality and content. Comparing the May to the August WASDE reports, U.S. soybean export projections have fallen 230 million bushels. The projected decrease in U.S soybean exports to China has been partially offset by increases to other trading partners. Projected increases in soybean exports by Brazil and Argentina do not offset the decrease in total world soybean trade. World soybean trade has decreased 5 million metric tons since the May WASDE report.

USDA's Response

On August 30, 2018, the USDA announced its Trade Mitigation Package (TMP) - "in response to unjustified retaliation by foreign nations surrounding the U.S. agricultural industry" (USDA-Office of the Secretary, 2018). The Administration chose to employ a safeguard for America's producers who have been negatively impacted by the price declines partially illustrated in Table 1. Their proposal includes implementing a 3-pronged program that offers up to \$12 billion to subsidize farmers and stimulate the agricultural economy as a result of lost export sales, diminishing markets, and lower commodity prices. The single year package is broken down into three parts, including the MFP, the Food Purchase and Distribution Program, and the Agricultural Trade Promotion (ATP) Program, as further explained below.

Funds for the TMP are established under the authority of the Commodity Credit Corporation (CCC) and the payments will be administered under USDA’s Farm Service Agency (FSA), Agricultural Marketing Service (AMS), and the Foreign Agricultural Service (FAS). According to a Congressional Research Service report, the CCC has the authority to borrow up to \$30 billion from the U.S. treasury without any additional authorization from Congress to fund spending programs within the Department of Agriculture (US-CRS). The CCC agency was founded in 1933 to provide producer price support within limits set by Congress.

Market Facilitation Program

The MFP program is expected to offer an initial payment of \$4.7 billion in direct payments to producers of cotton, corn, dairy, pork, soybeans, sorghum, and wheat. The program could potentially make a second payment later in the year if commodity prices continue to decrease.

Applications to receive payment will be open from September 4, 2018 until January 15, 2019; however, producers are asked to hold off visiting their local FSA office until harvest is 100% complete. The payment rate will be issued on 50% of total actual production for 2018. Table 2 illustrates the initial payment rate and the effective payment rate per commodity (payment rate multiplied by 50% production).

As an example, consider soybean production at 58 bushels per acre. The initial payment would be \$47.85 per acre (58*\$0.825).

Commodity Payment Rates (MFP)

Commodity	Initial Payment Rate	Effective Payment Rate¹
Cotton	\$0.06 / lb.	\$0.03 / bu.
Corn	\$0.01/ bu.	\$0.005/ bu.
Dairy (milk)	\$0.12 / cwt.	\$0.06 / cwt.
Pork (3 rd quarter)	\$8.00 / head	\$4.00 / head
Soybeans	\$1.65 / bu.	\$0.825 / bu.
Sorghum	\$0.86 / bu.	\$0.43 / bu.
Wheat	\$0.14 / bu.	\$0.07 / bu.

¹ Payment Rate multiplied by 50% of production

Table 2: Commodity Payment Rates (MFP)

There is a possibility of a second round of payments if the USDA deems them necessary. A second payment period for the remaining 50% of production would be open to producer enrollment. FSA

anticipates the announcement on or near December 3, 2018, but only if the current trade environment and continued low commodity prices persist. Payment limitations outside of those in place for the Agricultural Risk Coverage and Price Loss Coverage programs exist for MFP and are listed below.

Payment Limitations and Eligibility

- Must have an ownership interest in the commodity
- Actively engaged in farming
- Average Adjusted Gross Income (AGI) for 2014, 2015, and 2016 less than \$900,000
- Comply with Highly Erodible Land and Wetland Conservation regulations

AGI can be calculated from the Schedule F ([Form 1040](#)) of the Department of the Treasury Internal Revenue Service by subtracting from total income expenses such as health savings accounts, student loan interest, tuition and fees, moving expenses among several others. This value is calculated before the standard and itemized deductions are subtracted.

MFP payments will be capped per person or legal entity for a combined \$125,000 for eligible crop commodities and a combined \$125,000 for dairy production and hogs. Thus, there is potential for a \$250,000 total cap on a producer or farm involved in both crops and animal production.

Cotton, corn, soybeans, sorghum, and wheat payments will be based off 2018 actual harvested production. In addition, producers must have crop acreage reports on file at their local FSA office for each crop to be eligible for payment. If additional documentation is requested, examples of reliable production records include receipts of sale, income ledgers, custom harvesting invoices, truck scale tickets, or the like that is determined acceptable by the FSA county committee.

Active dairy operations as of June 1, 2018 will be based off highest annual milk production marketed during 2011, 2012, or 2013 as reported by the Margin Protection Program (MPP), including bumps. Dairy producers not currently enrolled in MPP are still eligible for payments and will follow MPP rules for new dairy operations and complete form CCC-781 to establish production history.

Pork will be based off number of live hogs as of August 1, 2018 and will be calculated on a per head basis. Examples of production evidence include breeding, inventory, or vet records.

Applications for the MFP program can be found at www.farmers.gov/manage/mfp.

The initial payment rates illustrated in Table 2, do not match the associated declines in commodity prices illustrated in Table 1. In Table 1, both grain sorghum and corn experienced decreases of \$0.30/ bu., but the initial payment rate for corn was \$0.01/ bu. compared to grain sorghum at \$0.86/ bu.. Wheat and cotton had increases in their projected marketing year average price in September compared to May, but had initial payment rates of \$0.14/bu. and \$0.06/bu., respectively. Of the grain and oilseed commodities, soybeans had the largest decrease in projected marketing year price and received the largest MFP initial payment rate of \$1.65/bu. Because of mounting concern by commodity groups and Congress on differences in absolute price changes in the World Outlook Board and the MFP payment rate, the USDA released a report on September 13, 2018 outlining the methodology used to determine the MFP and Food Purchase and Distribution Program (USDA-OCE).

Payment rates were set by calculating an estimate of gross trade disruption and dividing by 2017 U.S. production for each commodity. The estimate of gross trade disruption was calculated by subtracting the trade value without retaliatory tariffs from a particular country, from the trade value with retaliatory tariffs from the same country. The model estimates bilateral trade flows from each country and only reflects direct export loss due to the retaliatory tariff imposed on the U.S. commodity. “Indirect or secondary effects from the tariff, such as cross-commodity effects are not reflected in the gross trade damage estimate” (USDA-OCE). This method created the difference in initial payment rates seen in Table 2 compared to the absolute change in projected price illustrated in Table 1. The USDA’s Office of the Chief Economist did note, “that if deemed necessary, the second payment could account for other factors, such as new tariff levels, regional basis effects, or other market conditions.”

Food Purchase and Distribution Program

The Food Purchase and Distribution Program, directed by the AMS and USDA Food and Nutrition Service (FNS), plans to purchase \$1.2 billion in tariff-targeted commodities and re-distribute them throughout government nutrition assistance programs in participating states.

Examples of these programs include the National School Lunch Program for children, food banks and food pantries that participate in The Emergency Food Assistance Program (TEFAP), the Commodity Supplemental Foods Program for the elderly, and Indian Reservation Food Distribution programs.

AMS will make purchases over a period of four phases with the potential for adjustments depending on growing conditions, product availability, market conditions, trade negotiation status, and program capacity. AMS has implemented educational tools, such as flyers and webinars to educate vendors on the application process and distribution logistics.

Food Purchase and Distribution Program Expenditures	
Commodity	Target Amount
Beef	\$14,800,000
Dairy	\$84,900,000
Pork	\$558,800,000
Other Commodities	\$580,300,000
Total	\$1,238,800,000

Table 3: Expected Purchase Amounts for the Food Purchase and Distribution Program

Table 3 illustrates the total target amounts for eligible commodities in the program. Pork makes up nearly half of the program with expected purchases of \$558.8 million. Dairy and beef round out the remainder of the animal products with target amounts of \$84.9 million and \$14.8 million respectively. Other commodities account for the remainder of the \$1.2 billion and includes primarily fruits, vegetables, nuts, and beans.

Agricultural Trade Promotion Program

FAS will be implementing a \$200 million ATP Program to foster new growth in emerging foreign markets and provide opportunities to mitigate the effects of imposed tariffs on all sectors of U.S. agriculture. Eligible U.S. organizations must apply by November 2, 2018 to be considered for funding with allocations expected in early 2019. It should be noted that this deadline may be extended if funding is not exhausted. Utilization of funds are expected to be in the form of consumer advertising, public relations, point-of-sale demonstrations, participation in trade fairs and exhibits, market research, and technical assistance.

Estimated Ohio Payments for MFP

Because MFP payments are production-based, producers will have varying levels of total payments; a producer with higher yields will receive a higher total MFP payment and the opposite is true for a producer with lower yields. Using the commodity yields for Ohio published by the National Agricultural Statistics Service (NASS) in the Crop Production Report on September 12, 2018, yields of 188, 58 and 75 bu./acre for corn, soybeans, and wheat respectively are used to calculate the average per acre payment for an Ohio producer.

Expected Ohio Payments per Acre for 2018

Commodity	Yield	Effective Payment Rate	\$/Acre Payment
Corn	188 bu./acre ¹	\$0.005 /bu.	\$0.94 /acre
Soybeans	58 bu./acre ¹	\$0.825 /bu.	\$47.85 /acre
Winter Wheat	75 bu./acre ²	\$0.07 /bu.	\$5.25 /acre

¹ As reported by the [September 12, 2018](#) Crop Production Report by USDA-NASS

² As reported by the [August 10, 2018](#) Crop Production Report by USDA-NASS

Table 4: Expected Ohio Payments per Acre for 2018

Table 4 illustrates that with the yields reported by USDA-NASS and the effective payment rates from Table 2, that the initial MFP payment per acre would be approximately \$1 for corn, \$48 for soybeans and \$5 for winter wheat. Grain sorghum and cotton yields are not reported for Ohio and do not exist in substantive form compared to the three other crops within the state.

According to the National Acreage Report published June 29, 2018, representing estimates for planted acreage of principle crops for the 2018 production year, Ohio had almost 5 million acres of soybeans, 3.3 million acres of corn and 450,000 acres of winter wheat (USDA-NASS, 2018). Given these Ohio numbers, roughly 60% of the principal acres were planted to soybeans and roughly 40% were planted to corn. Assuming 100% of wheat acres were replanted to soybeans, only 9 percent of the soybean acres were second crop production behind a first crop of winter wheat. Using an 1,100 acre Ohio corn and soybean farm following the same percentage breakdowns, the farm would have acreage of 660 acres of soybeans, 440 acres of corn, and 99 acres of wheat. Using the per acre payment rates from Table 4, this farm would have a total MFP payment of \$32,508 assuming that it met all the qualifications, matched the projected Ohio yields, and enrolled 100% of the acres in MFP with FSA. Farms of the same size, but a larger percentage

of acres planted to soybeans will receive a larger payment given the size difference in effective per acre payment rates compared to corn.

Following the same crop rotation described above of 60% soybeans, 40% corn and 9% double first crop wheat, and followed with second crop soybeans, according to the effective per acre payments listed in Table 4, a farm would need to be roughly 4,228 acres in size before hitting the \$125,000 payment limitation. Farms with a crop rotation above 60% soybeans will hit the payment limitation at a smaller total acreage as more acres will favor the higher per acre payment under soybeans compared to corn.

Total Expected Ohio Payments

Using the Ohio effective per acre and per head payment rates represented in Tables 4 and 2, respectively, total expected MFP payments to Ohio's agricultural producers can be calculated. Table 5 illustrates the estimated Ohio payments for corn, soybeans, wheat, dairy and pork from the MFP. For corn, soybeans, and wheat, acreage estimates are again used from the Acreage Report and yields are those published in the Crop Production Report, both by NASS. Dairy production is calculated by taking the Margin Protection Program (MPP) production value reported by FSA. Producers do not have to be enrolled in the MPP program to collect MFP payments and given that 82% of Ohio's milk production was enrolled in MPP, an adjustment was made to get total participation for MFP at 100%. The Ohio Hog Inventory is taken from the value represented for Ohio in the Quarterly Hogs and Pig Report on June 28, 2018. It is important to note that the MFP will make payments based on hog inventory as of August 1, 2018; to do this, FSA will depend on vet and verifiable inventory reports.

Using the same representative corn and soybean farm illustrated in Brown and Sheldon (2018), the expected payment for MFP is \$22,657. The previously projected average net farm income for 2018 production was \$22,841, with a baseline average of \$63,423. The additional one-time MFP payment increases the projected net farm income to \$45,498, which is 28% lower than the baseline. Before the MFP payment, 2018 net farm income was projected 64% below the forecasted baseline. This estimation continues to use trend yields for the projections as yields for 2018 have not been finalized. The September 12, Crop Production Report does show deviation above historical 5- year trends. It is likely that above trend yields in part of the state coupled with MFP payments could

produce a net income that is above the baseline estimate previously mentioned. Producers who took advantage of early season grain marketing will also see an above baseline net farm income.

Total Expected Ohio Payments for First Round 2018

Commodity	Payment	Ohio Production	Total Expected Payment	Percent of Total U.S. MFP Est.
Corn	\$0.94 /acre	3.31 million acres ¹	\$3,111,400	3.2%
Soybeans	\$47.85 /acre	4.94 million acres ¹	\$236,379,000	6.5%
Wheat	\$5.25 /acre	450,000 thousand acres ¹	\$2,362,500	2.0%
Dairy	\$0.06/100lbs	358,338,157 lbs. ²	\$2,615,003	2.0%
Pork	\$4.00/head	2,850,000 head ³	\$11,400,000	4.0%
Grand Total			\$255,397,202	5.0%

¹Acreage Report for corn, soybean, and wheat Ohio production

²MPP program estimates for Ohio dairy production provided by FSA and accounts for 82% enrollment.

³Total Ohio Hog Inventory reported by NASS June 2018 (Actual Payment is based on Inventory on August 1)

Table 5: Total Expected Ohio Payments for First Round of MFP

Total Ohio payments for the first round of MFP are calculated in Table 5. It should be noted that a second round of payments is not guaranteed. Payments for the respective commodities are corn: \$3.1 million, soybeans: \$236.4 million, wheat: \$2.4 million, dairy: \$2.6 million, and pork: \$11.4 million. Payments could be more or less depending on production and participation in the program. Only 82% of dairy producers participated in the MPP program. If the same percentage sign up for MFP, then Ohio production is roughly 3,573,837,289 pounds. All commodities are assumed to have 100% participation. Ohio's total expected payment of \$255.4 million is roughly 5% of the expected U.S. total cost for MFP. Production values higher than those reported by NASS will lead to a higher total payment and potentially a larger share of the entire program.

Conclusion

Enrollment for the MFP is currently open to Ohio agricultural producers and will remain open until January 15, 2019. Producers will need to wait until 100% of their production is finished to register yields and acreage with the FSA. Producers of dairy and hogs can take their verifiable inventory and production records in at any time. Using projected per acre yields of 188 bu.-corn, 58 bu. -soybeans, and 75 bu. -wheat anticipated per acre Ohio payments would be \$0.94, \$47.85 and \$5.25 respectively. For a 1,100 acre grain farm with a crop rotation of 60% soybeans and 40%

corn with 9% double cropped wheat, the expected total payment would be \$32,508. With the same crop rotation and yields a farm of 4,228 acres would trigger the \$125,000 payment limitation. Total Expected Ohio Payment, for the first round of MFP, is estimated at \$255,397,202 and represents 5% of the U.S. expected cost, given 100% enrollment. The second round of MFP payments, if deemed necessary, could take into account local basis and cross commodity effects. As of now, Ohio producers need to decide to either enroll in the MFP program or not. Based on the U.S. Net Farm Income Forecast for 2018 published on August 30, 2018, Ohio Net Farm Income could be down in 2018 compared to 2017, and the MFP program could assist producers with negative cash flows and tight balance sheets from exiting the industry.

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